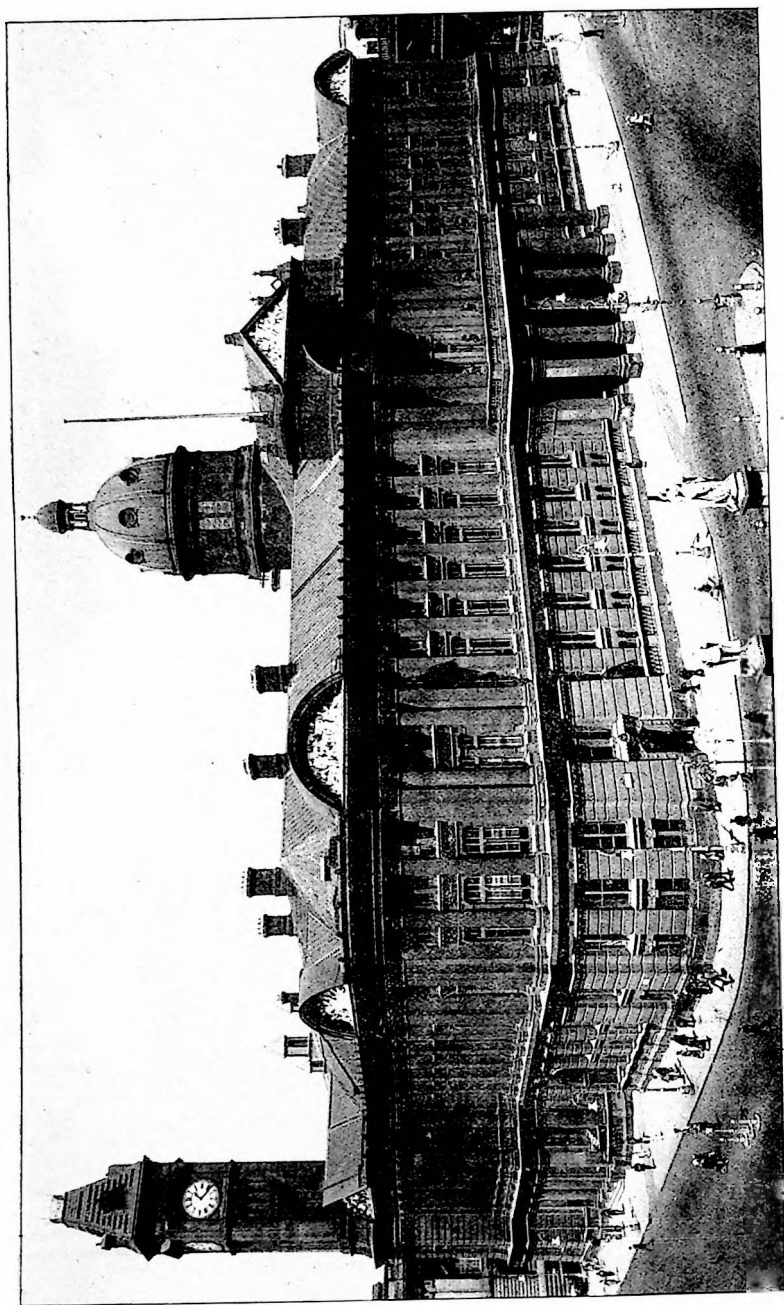




**BIRMINGHAM
AND ITS
CIVIC MANAGERS**

**THE
DEPARTMENTAL DOINGS
OF THE
CITY COUNCIL**



THE COUNCIL HOUSE, BIRMINGHAM.

BIRMINGHAM AND ITS CIVIC MANAGERS

THE DEPARTMENTAL DOINGS OF THE CITY COUNCIL

COMPILED AND EDITED BY

W. S. BODY,

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1928

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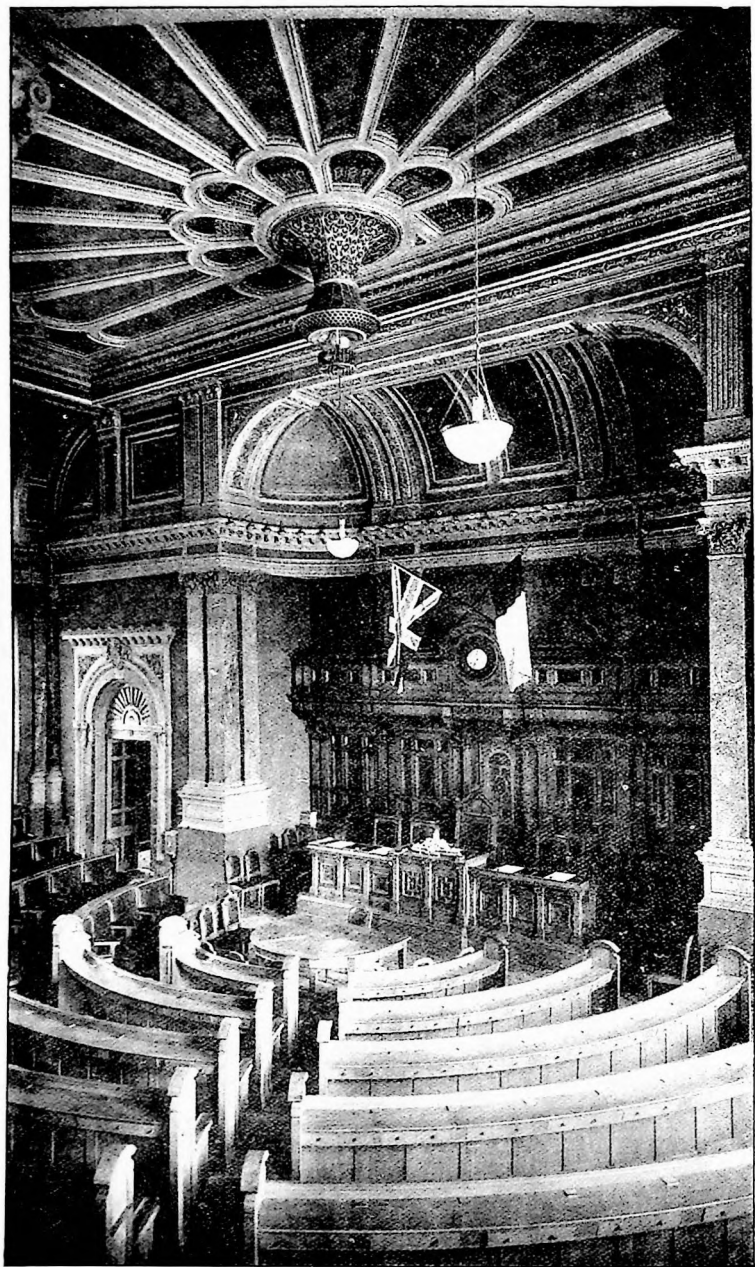
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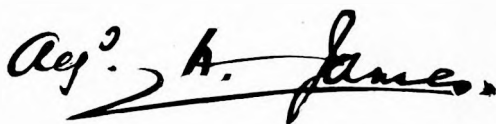
Photograph—S. Wilboughby Harrison, Small Heath.

THE COUNCIL CHAMBER.

FOREWORD.

I HEARTILY recommend to the citizens of Birmingham the plain and homely but inspiring record here unfolded of the work of the City Council and its committees. The small beginnings and gradual development of the various departments, their present activities and past achievements, may well be a source of wonder and pride. May it encourage a lively interest in the City's affairs.

To a much wider circle of strangers within our gates into whose hands this book may possibly fall during the British Industries Fair, I trust it will prove an interesting résumé of our methods of municipal management.

A handwritten signature in black ink, reading "A. J. James". The signature is written in a cursive style with a large, sweeping initial "A" and a long horizontal stroke extending from the end of the name.

Lord Mayor.

February, 1928.

INTRODUCTORY.

THE modern municipality's interest in her citizens extends from the cradle to the grave; nay, even longer, from the ante-natal clinic to the City Cemetery, so carefully looked after when interest in the erstwhile citizen is relinquished. In this opening chapter it is proposed to outline the various steps Birmingham takes to ensure the comfort and well-being of her people. Subsequent chapters will describe in detail the departmental achievements and activities of the Birmingham City Council, and unfold to local readers a story of civic administration to which they are closely linked, and of which they may justly be proud.

The Citizen's Official Entry into Birmingham Life.

The young citizen makes the first official entry into the affairs of the City through the Notification of Births Act, 1907. Under the provisions of the Act, within thirty-six hours of birth the Medical Officer of Health should be notified of the new arrival into the City's teeming family circle, when maternity and child-welfare visitors are, if necessary, available to advise and make known to the mother of the infant the arrangements that exist for the furtherance of its welfare. The Vaccination Officer will also be an acquaintance at this stage.

If unlucky enough during the early years to suffer from any infectious complaint, the youngster will come into contact with the health visitors and sanitary inspectors, who will endeavour to secure good nursing for the patient and isolation in the interests of the community.

From Five to Fourteen.

At the age of five the young citizen is made aware of the City's educational guardianship by entry into the Council schools. Here medical examination and early treatment by the officers of the school medical service are potent factors in enhancing physical fitness in later years. Provision is made for blind and physically and mentally defective children, also for the deaf, accompanied by open-air schools for weakly infants.

Much attention is directed nowadays by the Education Committee through its school medical service to the physical well-being of the school child, and loads of happy children are transported by the City's trams and buses from the congested streets to the playing fields afar, where the air is pure. Civic efforts are supplemented by various leagues for encouraging cricket, football, and swimming, but these are mainly for organized games out of school hours. The Education Committee, on occasions, organizes school camps for Birmingham's junior citizens, as well as games in the parks and evening play centres.

As in other industrial areas, most Birmingham children leave school at fourteen. A general review of the scholars of eleven years of age in the elementary schools takes place annually. Suitable scholars are encouraged to sit for entrance examinations of Council secondary schools, and a generous proportion of free places and maintenance grants is awarded to children who show promise of benefiting by continued education. The Education Committee thus strives to give effect to the provisions of the Education Act "that no child shall be debarred from receiving secondary education through inability to pay fees."

Opportunities for Continued Education.

Where parents are unable to accept the facilities offered for secondary education for their children, admirable opportunities exist for continuation



COUNCIL HOUSE RECEPTION ROOM, LOOKING WEST.

Photograph—S. Willoughby Harrison, Small Heath.

of the pupil's education at the Evening Institutes. The curricula include technical, academic, and commercial subjects, and free places are allotted to all students who join within four weeks from the commencement of the session after they have left an elementary school. No effort is spared to enable young citizens to realize that education does not end on the day they leave school. To point the way to further advancement they are advised that at their service are the City's museums, art gallery, and libraries. The central libraries especially contain an excellent scientific and technical section of great value and assistance to advanced students of the Institutes.

The Juvenile Employment Department of the Education Committee has been greatly extended during the last few years. Children in elementary schools are now required to remain at school until the end of the term in which they attain the age of fourteen years. "After-care" has also developed, and close relations have been established between the schools and industry and commerce, enabling systematic efforts to be made to place youngsters in employment for which by training, health, and inclination they are best suited. During the last few weeks of the school term officers of the department attend to interview children due to leave, and discuss with them not only employment, but also matters affecting their welfare. Special attention is given to secondary school "leavers," and advice and assistance offered in finding suitable business openings.

Artistic, Literary, Recreative Amenities.

Such are a few of the responsibilities the Birmingham City Council shoulders to fit its young citizens in health and education for their careers. At no time in her history has Birmingham so nearly approached the modern conception of a perfect city. For the educational advantages already

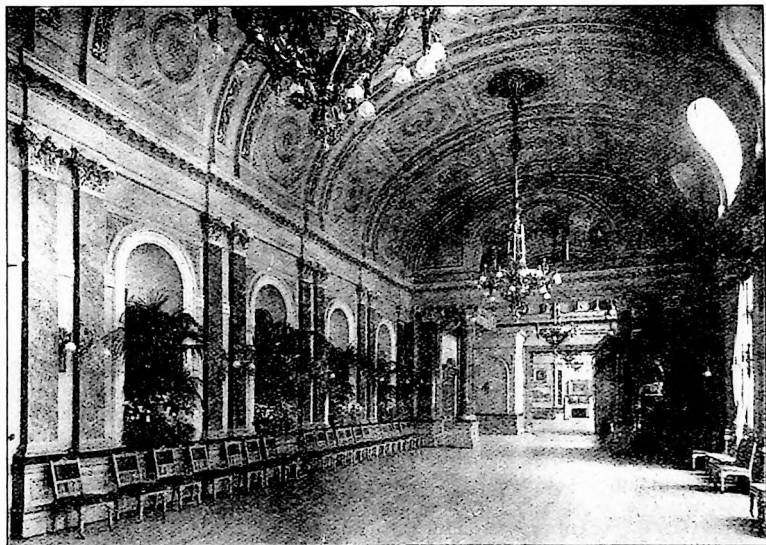
outlined and for her manufactures and commerce she is justly famed : the City is no less fortunate in her artistic and literary amenities. An art gallery second to none outside London, and a library that contains the most extensive Shakespeare collection in existence, afford boundless opportunities for the adolescent citizen.

The physical and recreative side of adolescent and adult citizenship is no less the constant care of the City fathers than during the period of schooling. The shortage of suitable and available places for open-air games has to a large extent been overcome by purchase of grounds, ably seconded by generous private gifts, and there are no fewer than 2,061 acres within the City boundaries set aside as parks and playing fields. Here the citizen may continue to "play the game" after he has passed from a school team, no matter his particular sport, ample provision being made for football and cricket, tennis, golf, and hockey, or the more leisurely bowls for his more sedate days. And without the City boundaries, apart from the "open road" of the countryside, are the Lickey Hills, Warley, and other beauty spots.

Adult Citizenship with Rights and Obligations.

The citizen who has been physically and educationally "fathered" by the City till manhood now begins to acquire legal rights and obligations.

On attaining his majority the male citizen is entitled to have his name inserted in the records of the City as a Parliamentary elector. If he becomes a householder or the occupier of a portion of a house let to him unfurnished by the direct householder, he may, because he is responsible for the payment (as rates) of a proportion of the expenses of the municipal housekeeping, vote for the election of city councillors, which privilege may carry with it an obligation to serve in his turn with the other citizens on juries.



COUNCIL HOUSE RECEPTION ROOM, LOOKING EAST.

Photograph—S. Willoughby Harrison, Small Heath.

The exercise of the local franchise is admittedly restricted somewhat by the difficulty of becoming householders or even sub-householders owing to scarcity of houses ; but the city administrators are tackling the matter, and citizens are being afforded opportunities of becoming not only householders but house-owners, thanks to the facilities and assistance of Birmingham's Municipal Bank.

The City Council's Unrelaxing Care.

Let us leave the young citizen here on the threshold of a new home. The municipality's interest in him is now greater than ever. Besides its parks and playing fields ; its museums, art gallery, and libraries ; its street lighting, cleansing, policing, its public baths and wash-houses, the City also supplies him in the home with electric light, with gas-cookers and fires, even with a dust-bin from the Salvage Department. It brings a water supply from the hills and valleys of Wales to his door, and provides a road transport system of 'buses and trams second to none. He must now, as a grown-up member of Birmingham's large family, become increasingly conscious of the City Council's vast activities—of its ubiquitous and unrelaxing care.

The present-day municipality so consistently effaces itself that, were it not for the periodical rate demand, many citizens would be almost unaware of its existence. The services it renders are largely taken for granted, and unless a cause for disagreement arises, the citizen usually remains indifferent to the efforts that enable the administration of the City to proceed so effectively. It is hoped that the work of the various departments described in the following chapters will be widely read, and that it may be the means of kindling an ever-increasing interest in the City's affairs.

Chapter I.

THE CITY COUNCIL : WHAT IT IS AND HOW IT FUNCTIONS.

THE various departmental activities of the municipality are better understood if citizens know what the City Council is and how it functions.

In England and Wales local government bodies consist of Municipal Councils and county and non-county boroughs, Urban and Rural Parish Councils, Urban and Rural District Councils, and County Councils ; also other authorities elected for special purposes, such as Poor Law or Hospital Administration, or the Drainage Board described in a later page. Area and population are factors that govern their powers and duties.

Public Statutes, Local Acts, and Special Powers.

Birmingham is a county borough, and the City Council exercises its powers under the Municipal Corporations Acts, the Public Health Acts, and many other statutes relating, *inter alia*, to Education, Housing and Town Planning, and Rating and Valuation. Under a number of public statutes and local acts the trading undertakings—Gas, Water, Electric Supply, and Tramways—are carried on as extensive business concerns, and the Municipal Bank exists by virtue of special powers granted to Birmingham by Parliament.

The City is managed by a Council of 120 members—three councillors from each of the thirty wards into which it is divided, plus thirty aldermen. The councillors elect the aldermen and each alderman is appointed returning officer for a ward. Councillors are elected for three years, one-third retiring each year ; aldermen are elected for six years, one-half retiring every third

year. The Council meets monthly, forty members forming a quorum, for the transaction of business, usually arising from reports of its various committees, the Lord Mayor presiding. Three days' notice of the business to be transacted must be given both to the public and the Council, and though the Press are legally entitled to be present at Council meetings the public are only admitted by courtesy.

What a Committee Cannot Do.

Making a rate or borrowing money cannot be done by a committee, but for the effective administration of the City's affairs the Council appoints and delegates certain powers and duties to a number of committees, who are required to report not less than twice a year. This enables the Council to exercise its supreme authority over their actions. The Watch Committee is an exception: as the police authority for the City, their actions, except those involving expenditure, are not necessarily subject to the approval of the Council.

The various committees are Agricultural and Smallholdings, Allotments, Assessments, Asylums, Bank, Baths, Distress, Education, Electric Supply, Estates, Finance, Gas, General Purposes, Local Pension, Markets and Fairs, Mental Deficiency Act, Museum and Art Gallery, Parks, Public Health and Maternity and Child Welfare, Public Libraries, Public Works and Town Planning, Rating and Valuation, Salaries, Wages and Labour, Salvage and Stables, Superannuation Appeals, Tramways and Omnibus, Watch, and Water.

Each committee prepares annually an estimate of its income and expenditure—estimates that are closely scrutinized and co-ordinated by the Finance Committee so that the Council may judge of their ultimate financial effect. If they are approved a rate is made and levied on the ratepayers to meet the City's financial needs.

Lord Mayor.

A statutory meeting of the Council is held every 9th of November to elect a Lord Mayor—an office that in Birmingham usually rotates in accordance with the political constitution of the Council. He need not necessarily be a councillor or alderman, but must possess the same local government qualifications required by members of the Council, which has not yet gone outside its own members for a Mayor. The Lord Mayor is allocated, during his year of office, the sum of £2,000, office accommodation, and clerical assistance, and a motor car is also placed at his disposal by the Corporation.

In Birmingham the duties of the Lord Mayor are generally more onerous than in other large cities. He becomes a member of every standing committee, and usually attends more committee meetings than any other member of the Council. Within and without the City he is called upon to represent the citizens and to preside at innumerable public, social, and charitable functions. He is the centre of the civic social life, and on behalf of the Birmingham citizens offers hospitality at the Council House to distinguished visitors to the City.

Principal Statutory Officers of the City.

Besides the Town Clerk there are four other principal statutory officers of the City—the City Treasurer, who, like the Town Clerk, is appointed under the Municipal Corporations Act, the Medical Officer of Health, the City Surveyor, and the Inspector of Nuisances, the last-named three being

appointed under the Public Health Acts. The Recorder is also appointed under the first-named Act, and, though paid by the Corporation, is nominated by the Crown.

The Town Clerk is the chief executive officer of the Corporation, and, being a lawyer, is also the Corporation's legal adviser. Though it is not essential that the position should be held by a lawyer, it is now the practice to appoint Town Clerks with legal qualifications.

A city like Birmingham makes a great call on a Town Clerk's administrative and organizing ability, as well as on his legal guidance; he is in a large measure a co-ordinating officer, and much depends on him in securing administrative unity in the various departments. He is aided by a deputy town clerk and legal and other trained assistants. His duties involve the custody of all records of the Corporation, including the recording of the minutes of proceedings of the Council and its committees. He cannot, of course, personally record these proceedings, and on his staff are a Clerk to the Council and committee clerks who carry out these duties: the proceedings of three of the trading committees and the Education Committee are recorded by secretaries attached to them.

As Registration Officer the Town Clerk is responsible for the preparation of the register of Parliamentary and local government electors; as Town Clerk he is also responsible for the polling arrangements at both Parliamentary and municipal elections, and is acting returning officer at Parliamentary elections.

Committees without Separate Executive Departments.

Among the many legal duties attached to his office, the Town Clerk has work to perform in the promotion of Local Bills in Parliament and in watching and opposing Bills that may conflict with the City's interests, as



THE COUNCIL HOUSE AND ART GALLERY EXTENSION.

well as obtaining Provisional Orders and representing the Corporation at various Government inquiries.

The General Purposes, Salaries, Wages and Labour, Distress, and Local Pensions Committees have no separate executive, and are administered entirely from the Town Clerk's department. The Land Charges Act, 1925, has made it necessary to establish a separate branch of the Department to maintain a Local Land Charges Register of land and premises upon which the City has a charge, and of prohibitions and restrictions enforced by the Corporation.

As the legal adviser of the Lord Mayor and the Council, the Town Clerk is constantly engaged in questions of procedure and preparation of reports on legal and other matters referred to him. In his charge is the Corporation Seal, and he has to prepare, seal, issue, and register the mortgages which follow upon the Corporation's borrowings; he is also clerk to the Asylums Committee of Visitors, clerk to the Education Authority, and solicitor to the Drainage Board, referred to in another chapter.

The Co-ordinating Committee.

The largest and most representative committee of the Council is the General Purposes Committee—previously referred to as having no separate executive department. It consists of the Lord Mayor, the ex-Lord Mayor, the chairman of the Drainage Board, one member of each standing committee, and two members nominated by the Labour group of the Council. As may be gathered from its constitution, it is a co-ordinating committee, with the duty of observing that instructions of the Council of general application are carried out. It is responsible for the Lord Mayor's and Town Clerk's staff, and is concerned mainly through these staffs with all matters that arise or arrangements made on the occasions of visits to the City by distinguished personages.

The General Purposes Committee prepares for the Council's consideration the bye-laws, standing orders, and instructions to committees by which procedure at its meetings is guided and the duties of the various committees regulated. The provision of accommodation for the administrative staffs of the several departments is its duty, and also the difficult and often thankless task of nominating members for service upon the standing committees and the numerous public bodies, charities, and trusts upon which the Council has direct representation. Not least in importance economically is the work it performs in standardizing and co-ordinating the purchase of goods and stores common to more than one department.

An infinite variety of detail administrative work always awaits this committee in connection with the management and distribution of various charities and prize funds, the publication of a continuous history of the Corporation, and the consideration of Orders under the Shop Acts. Well and truly is their position defined in the first of their "instructions" from the City Council: "To attend to all business and matters referred to it by the Council, and also all business of a general character not entrusted to any of the other committees, and to suggest to the Council from time to time any new business which, in its opinion, is important to the public interest."

Pensions and Pensions Officers.

The administration of the Local Pension Committee, established under the Old Age Pensions Act, 1908, is carried out in the office of the Town Clerk. He acts as clerk to the committee, which consists of members of the Council only, but the committee does not control the Pensions Officers,

annual balance-sheet, are so lucidly set out in the series of tables in the City Treasurer's epitome of the accounts for the year ended March 31st, 1927, that they are reproduced here.*

In the first table may be traced for the past four years the growth of population, the increases in assessable and rateable value, the amount raised from the rates for the Corporation's and Guardians' expenses, and interesting totals of loans and revenue told in more detail in other tables. It will be seen also that the City's "turnover" is the highest figure yet reached—nearly £14,000,000. It may be gleaned from Table 3 that about £600,000 was expended out of the rates on roads and bridges, and the finance of housing is outlined in Table 4.

Loans amounting to £7,288,743 were raised and advanced to Corporation Departments during the year. Of this sum, £3,275,000 was for housing and £2,367,801 for trading departments. Thus 77 per cent. of the allocations was in respect of reproductive capital expenditure, and, with the exception of the money spent upon housing, should give a good return for its investment by the ratepayers in the undertakings concerned. Table 5 ("Summary of Loans") indicates the *purpose* for which loans were raised. These again have been apportioned as between reproductive and non-reproductive services.

The stock issues are detailed in Table 7. The latest took place in 1926, when £5,000,000 was offered for subscription. The result affords evidence of the high appreciation of Birmingham issues by the investing public, for the lists remained open only an hour and a half, and the loan was largely over-subscribed.

Remarkable Record of Trading Departments.

Table 8 indicates that £112,000 was advanced from the profits of the Electricity, Gas, and Tramways Departments in relief of rates, representing a rate of 5d. in the £. These contributions have been made from revenue without recourse to the departmental reserves. The record of the trading departments is remarkable. From 1875 to 1927 the Gas Department has contributed £1,726,357 to the rates, a sum equal to three-quarters of the department's net debt outstanding at March 31st, 1927. The Electric Supply Department has transferred a sum of £357,491 since 1909, while the figure for the Tramway Department since 1904 is £569,077. The rates have benefited to the extent of £2,652,925 as a result of ownership of the trading undertakings by the Corporation.

Ministry of Transport Motor Taxation Licences.

The proceeds of the motor taxation licences (Table 10) do not form any part of the revenue of the City, but are paid over to the Government and used for the purpose of financing road schemes throughout the country. The grants in respect of roads payable from the Road Fund do not necessarily bear any relation to the amount collected within the city area. The registration and issue of the licences is carried out by the City Treasurer's Department, and the cost in connection therewith is borne by the Ministry of Transport.

Rates.

The cost per head of population for the whole of the Corporation's services chargeable to the Borough rate is £2 19s. 9d., and the cheapness of

* The City Treasurer has kindly consented to my reproducing these tables.—W.S.B.

these services becomes apparent when an examination is made into the cost of a few individual items, such as education, 17s. 8d. ; public health, 18s. 1d. ; police and fire brigade, 7s. 1d. ; housing, 2s. 7d. ; and public libraries, 1s. 4d. The Government contribute nearly £1,750,000 as grants to the Corporation (equal to a rate of 6s. 6d. in the £) in respect of services performed which are of a national character. Compared with pre-war figures, the cost to the rates of grant-aided services is much higher than those Corporation services for which no grant is received.

A diagram is given (Table 14) showing increase in rates 1913-14 to 1927-28, and their division between the Corporation and the Guardians and Rating Authority.

Reproductive and Non-Reproductive Debt.

An interesting graph is introduced (Table 13), which illustrates the ratio between reproductive and non-reproductive debt, indicating that the greater part of the debt is represented by trading and other reproductive undertakings whose value may be presumed to be greatly in excess of the debt outstanding.

A bird's eye view is given in Table 15 of the total capital raised. On this basis the Birmingham Corporation is the biggest undertaking in the Midlands. Comparing it with national concerns, it is three times larger than the largest bank, and four times larger than the largest brewery. A local authority's debt may be funded or unfunded, and usually both classes exist. One-third of the loans outstanding is unfunded (or floating), while of the balance about £10,000,000 is redeemable only at the option of the Corporation, and £8,000,000 does not fall to be repaid until 1955 or after.

These floating and funded debts are shown in Table 6. The gas and water annuities mentioned therein were created under Acts of Parliament in 1875, and were issued in the first place to the shareholders of the old Gas and Water Companies as consideration for the purchase price of the concerns. The annuities are a first charge on the respective undertakings, and are also chargeable on the Borough Fund and Borough Rate. They are perpetual, but may be redeemed at any time by agreement between the Corporation and the Annuitant, and the Corporation are required to extinguish the gas annuities within eighty-five years and the water annuities within ninety-five years of the Act. This method of borrowing by local authorities is very rarely met, and is not now resorted to.

The inquiring and painstaking citizen will, indeed, find a mine of information in these exhaustive tables.

Elective Auditors.

The general accounts of Birmingham as a municipal borough are audited by three auditors, two elected triennially by the citizens and called elective auditors, and one appointed annually by the Lord Mayor. In view of the criticism at times levelled against municipal expenditure, the lack of interest shown by citizens in the election of their auditors is noteworthy.

GENERAL STATISTICS.

TABLE 1.

	1924	1925	1926	1927
GENERAL.				
1. Area of City (acres)	43,601	43,601	43,601	43,601
2. Population	944,386	952,766	961,222	969,752
RATES AND ASSESSMENTS				
3. Assessable Value	£5,566,686	£5,659,583	£5,789,447	£5,925,782
4. Rateable Value	£5,595,155	£5,686,871	£5,814,738	£5,949,979
5. Rateable Value per head of population	£5 18s. 6d.	£5 19s. 4d.	£6 1s. 0d.	£6 2s. 9d.
6. Produce of 1d. Rate	£20,986	£21,344	£21,757	£22,211
7. Number of Rated Assessments in the City	221,990	225,673	231,813	238,144
AMOUNT RAISED FROM RATES.				
8. Corporation's Expenses	£2,578,416	£2,676,069	£2,814,168	£2,925,068
9. Guardians' Expenses	£1,316,032	£1,255,900	£1,220,100	£1,192,821
10. Overseers' Expenses	£39,993	£38,634	£38,174	£44,513
LOANS.				
11. Total Loans raised	£39,040,383	£42,208,211	£45,745,646	£53,002,198
12. Capital Expenditure (i.e., defrayed from Loans)	£37,962,087	£41,355,842	£45,809,452	£51,739,809
13. Debt Repaid	£12,369,187	£13,121,561	£13,979,211	£14,869,691
14. Loans outstanding (Line No. 11 less No. 13)	£26,671,196	£29,086,650	£31,766,435	£38,132,507
15. Redemption and Sinking Funds in hand or invested	£1,375,558	£1,463,714	£1,511,143	£2,017,942
16. Net Loan Debt (Line No. 14 less No. 15)	£25,295,638	£27,622,936	£30,255,292	£36,114,565
17. Net Debt per head of population	£26 15s. 9d.	£28 19s. 10d.	£31 9s. 6d.	£37 4s. 10d.
18. Loans advanced to Departments during year	£2,240,403	£3,337,088	£4,138,471	£7,288,743
19. Loans repaid by Departments during year— Sinking Fund Instalments Proceeds of Sales, etc.	£764,276 £79,508	£825,370 £181,318	£916,476 £387,776	£970,060 £431,743
REVENUE.				
20. Turnover of the Corporation	£11,250,398	£11,695,737	£12,236,579	£13,825,279
21. Government Grants (included in Line No. 20)	£1,575,225	£1,654,260	£1,696,697	£1,808,090

REVENUE AND EXPENDITURE.

SUMMARY FOR THE YEAR ENDED 31st MARCH, 1927.

TABLE 2.

PARTICULARS OF REVENUE.	Borough Fund.	Exchequer Contribution	†Housing (Assisted Scheme) 1919.	Electric Supply.	Gas.	Tramways.	Water.	Sundry Funds.	Total.	Percentage of Total.
1	2	3	4	5	6	7	8	9	10	11
Rates	£ 2,925,068	£ —	£ —	£ —	£ —	£ —	£ —	£ —	£ 2,925,068	% 21.75
Aid from Rates ..	—	—	22,115	—	—	—	55,000	—	77,115	.56
Charges for Commodities and Services	438,264	—	82,811	1,512,785	2,786,040	1,758,349	732,719	8,257	7,319,225	52.94
Government Grants ..	1,474,126	177,918	142,197	2,172	—	—	—	11,677	1,808,090	13.08
General Income	682,898	142	67,018	23,343	*319,734	8,017	6,398	476,031	1,583,581	11.46
Profits from Trading Undertakings ..	112,200	—	—	—	—	—	—	—	112,200	.81
REVENUE FOR YEAR	£5,632,556	178,060	314,141	1,538,300	3,105,774	1,766,366	794,117	495,965	13,825,279	100.00

PARTICULARS OF EXPENDITURE.	£	£	£	£	£	£	£	£	£	%
Working Expenses ..	4,557,986	176,492	80,686	882,940	2,546,444	1,357,277	353,949	345,564	10,301,338	77.55
Loan Charges ..	986,968	—	233,455	482,605	168,773	202,069	424,000	14,594	2,512,464	18.92
Rate Aid to Trading Undertakings ..	55,000	—	—	—	—	—	—	—	55,000	.42
Transfers to Reserve Funds ..	—	—	—	141,755	†104,837	167,020	—	—	413,612	3.11
EXPENDITURE FOR YEAR	£5,599,954	176,492	314,141	1,507,300	2,820,054	1,726,366	777,949	360,158	13,282,414	100.00
Excess Income for year	32,602	1,568	—	31,000	285,720	40,000	16,168	135,807	542,865	—
	£5,632,556	178,060	314,141	1,538,300	3,105,774	1,766,366	794,117	495,965	13,825,279	—

* Further Revenue and Expenditure relating to Housing are included in column 2. Full particulars are given in Table 4.

† Includes £312,172 transferred from Capital Account in respect of Capital Expenditure previously charged to Revenue Account. Of this sum £67,652 has been transferred to Reserve Fund, and forms part of £104,837 (†) above.

TABLE 3.

STATEMENT SHOWING THE NET COST UNDER THE PRINCIPAL HEADS OF SERVICE.
YEAR ENDED 31st MARCH, 1927.

SERVICE. (1)	Gross Expenditure. (2)	Income (excluding Government Grants). (3)	Net Expenditure or Surplus. (4)	Government Grants. (5)	Net cost (or relief) to rates. (6)	Rate Poundage. (7)
	£	£	£	£	£	s. d.
1. Administration and General Expenses (not allocated to specific services) ..	200,824	187,354	13,470	1,310	12,160	.56
2. Agricultural and Small Holdings ..	24,463	12,786	11,677	11,677	1,942	.12
3. Agricultural Rates Acts ..	—	—	—	2,706	2,706	.09
4. Allotments ..	8,942	7,000	1,942	—	1,942	1.53
5. Asylums ..	39,847	1,775	38,072	4,949	33,123	3.05
6. Baths ..	93,585	23,051	70,534	4,648	65,886	.08
7. Cemeteries ..	32,845	30,869	1,976	177	1,799	.09
8. Diseases of Animals Acts ..	2,054	33	2,021	55	1,966	.69
9. Dwelling House Improvement Scheme ..	92,961	77,938	15,023	—	15,023	
10. Education—						
(a) Elementary ..	1,463,722	22,289	1,441,433	773,103	668,330	2 6.90
(b) Higher ..	370,225	27,418	342,807	156,262	186,545	8.63
11. Exchequer Contribution Account ..	—	—	—	37,590	37,590	4.05
12. Fire Brigade ..	88,859	372	88,487	999	87,488	1 10.54
13. Highways and Bridges ..	591,348	13,057	578,291	90,743	487,548	5.16
14. Housing ..	748,634	388,616	360,018	248,306	111,712	.41
15. Justice—Administration of ..	30,616	21,801	8,815	—	8,815	1.14
16. Markets and Fairs ..	61,693	86,439	Cr. 24,746	—	24,746	1.00
17. Mental Deficiency Act ..	45,298	2,033	43,265	21,587	21,678	—
18. Motor Taxation Licences—Expenses ..	7,661	75	7,586	7,586	—	—

19. Municipal Buildings and General Properties	142,454	87,362	55,092	54	55,038	2.54
20. Museum and Art Gallery	12,351	488	11,863	—	11,863	.55
21. Parks and Recreation Grounds	143,134	25,886	117,248	9,754	107,494	4.97
22. Police	541,416	37,357	504,059	248,740	255,319	11.81
23. Public Conveniences	15,754	7,356	8,398	—	8,398	.39
24. Public Health—						
(a) Infectious Diseases	67,025	2,187	64,838	—	64,838	3.00
(b) Maternity and Child Welfare	59,581	3,913	55,668	27,137	28,531	1.32
(c) Prevention of Adulteration of Food and Drugs	2,454	232	2,222	—	2,222	.10
(d) Sanatoria	89,692	10,075	79,617	46,646	32,971	1.52
(e) Venereal Diseases	7,175	207	6,968	5,269	1,699	.08
(f) General	63,809	10,648	53,161	—	53,161	2.46
25. Public Libraries	55,602	2,826	52,776	149	52,627	2.43
26. Public Lighting	109,998	2,552	107,446	—	107,446	4.97
27. Registration and Elections	10,328	—	10,328	3,094	7,234	.34
28. Salvage and Refuse Disposal	256,145	43,987	212,158	10,820	201,338	9.31
29. Sewers, Sewage Disposal, and Rivers	349,125	4,907	344,218	32,329	311,889	1 2.42
30. Town Planning	4,411	28	4,383	—	4,383	.20
31. Unemployed Workmen Act, 1905	1,125	—	1,125	—	1,125	.05
32. Weights and Measures	8,230	5,114	3,116	—	3,116	.14

TOTAL

£5,843,386

£1,148,031

£4,695,355

£1,745,690

£2,949,665

11 : 4.38

Profits transferred from Trading Undertakings:—

Electric Supply

Cr. 31,000

Cr. 1.43

Gas

Cr. 41,200

Cr. 1.91

Tramways

Cr. 40,000

Cr. 1.85

Rate Aid to Trading Undertaking:—

Water

55,000

2.54

Total

Cr. 57,200

Cr. 2.65

GRAND TOTAL

£2,892,465

11 : 1.73

The story of Birmingham's activities under the different Housing Acts, and the Estates Department's management and collection of rents, is told in Chapter XIV. The principal financial provisions contained in post-war housing legislation affecting the various schemes are as follows :

(a) **Housing, Town Planning, etc., Act, 1919 (" Addison " Scheme).**

The balance of any loss over and above the produce of a 1d. rate, subject to the Regulations, is met by the Exchequer.

(b) **Housing, etc., Act, 1923 (" Chamberlain " Scheme).**

The Government pay £6 per annum for 20 years in respect of each house erected by the Local Authority, so that, apart from this subsidy, which is payable in any case, the actual annual loss so far as the Local Authority is concerned may be more or less than this sum.

In respect of houses not completed before the 1st October, 1927, the contribution has been reduced to £4 for 20 years.

The liability of the Government is limited ; that of the Local Authority is unlimited.

With a view to encouraging private enterprise the subsidy may be capitalized and paid to builders by way of a lump sum. In respect of houses completed prior to the 1st October 1927, £100 was paid in Birmingham for each such house. Of this sum £75 represented the Government contribution and £25 a contribution by the Corporation, but in respect of those houses completed after the 1st October, 1927, £50 only is paid. This sum represents the reduced Government contribution of £4 per annum for 20 years and no addition thereto is made by the Corporation.

(c) **Housing (Financial Provisions) Act, 1924 (" Wheatley " Scheme).**

Subject to the observance of certain " special conditions " (the chief of which is that the houses must be " let "), the Government pay an annual sum of £9 for 40 years. In respect of houses not completed prior to the 1st October, 1927, this annual sum has been reduced to £7 10s. 0d. for 40 years.

The liability of the Government is limited to these sums respectively. It is further provided that, where the loss to the Local Authority exceeds £4 10s. 0d. per house per annum (£3 15s. 0d. after the 1st October 1927) any such excess may be recovered from the tenant. The Local Authority, must, however, lose at least £4 10s. 0d. per annum per house (£3 15s. 0d. after the 1st October, 1927) before they can qualify for Government assistance under this Act.

The Government contribution under this Act may not be used for the purpose of paying lump sum subsidies to builders, although provision is made for the continuance of those payable under the 1923 Act (see above).

TABLE 4.

HOUSING.

	HOUSING (ASSISTED SCHEME) 1919	HOUSING (ASSISTED SCHEMES) 1923 AND 1924
I. Number of Houses completed to 31st March, 1927.....	3,234	11,805
II. Number of Houses in course of erection or for which con- tracts had been let to 31st March, 1927	—	3,751
III. Number of Houses sold as at 31st March, 1927.....	35	2,536
IV. Capital Expenditure—	£	£
Land	166,890	343,954
Houses	2,717,719	5,651,363
Roads	105,102	455,353
Sewers	19,953	174,351
Subsidies to Private Builders	—	396,200
	*£3,009,664	†£7,021,221
V. Rents of Houses (exclusive of rates)—		
(a) Non-Parlour :		
3 Bedrooms	7/- to 8/6	7/9 to 8/-
2 " 	—	6/24d.
2 " (Flats).	—	5/1d.
(b) Parlour :		
2 Bedrooms	7/-	—
3 " 	8/3 to 10/6	9/- to 10/6
4 " 	9/6 to 11/3	—
VI. Summary of Income—		
Rents	82,811	163,377
Rates—Amount collected in respect of	42,813	69,374
Tax recoverable	10,857	18,266
Interest on Investments, etc.	13,348	6,035
Total General Income	149,829	257,052
Government Subsidy	142,197	106,109
Contribution from Borough Rate	23,211	70,235
	£315,237	£433,396
VII. Summary of Expenditure—		
Interest on Loans	199,876	244,953
Redemption of Loans	38,553	39,870
Rents, Rates, Taxes, and Insurance	54,399	88,961
Repairs and Maintenance ..	13,506	36,978
Supervision and Management	7,279	20,195
Rent Losses	93	62
Miscellaneous Expenses	1,531	2,377
	£315,237	£433,396

* Including Houses Sold, £13,280

† Including Houses Sold £944,430

SUMMARY OF LOANS AND CAPITAL EXPENDITURE.

TABLE 5.

AMOUNTS RAISED, EXPENDITURE ON CAPITAL ACCOUNT AND LOAN INDEBTEDNESS, 31st MARCH, 1927.

Purpose	Original Loans	Expenditure on Capital Account	Provided from Income, etc. for Repayment.	Balances of Loans remaining to be provided for
1	2	3	4	5
	£	£	£	£
Reproductive—				
Agricultural and Small Holdings	253,916	253,628	10,418	243,498
Allotments	41,486	41,358	7,803	33,683
Baths and Wash-houses	476,958	480,319	221,475	255,483
Cemeteries	160,296	153,132	103,008	57,288
Electric Supply	7,533,751	7,580,753	2,280,288	5,253,463
Gas	4,232,285	3,988,899	1,981,248	2,251,037
Housing	10,089,765	9,372,564	660,196	9,429,569
Kingsbury Rifle Range	27,820	27,820	4,476	23,344
Markets	472,075	472,014	384,635	87,440
Tramways	3,559,443	3,467,808	1,543,004	2,016,439
Water	9,191,010	9,180,300	1,623,769	7,567,241
Total—Reproductive	36,038,805	35,018,595	8,820,320	27,218,485
Non-reproductive—				
Asylums	693,132	700,934	435,095	258,037
Bridges	184,203	283,587	36,801	147,402
Dwelling House Improvement Scheme	1,734,100	1,732,527	1,064,295	669,805
Education	2,830,208	2,813,758	1,518,282	1,311,926
Fire Stations	131,636	131,723	64,984	66,652
Hospitals and Sanatoria	276,412	297,644	181,404	95,008
Housing (Assisted Scheme), 1923 and 1924: (Subsidies to Private Builders)	475,000	396,200	17,090	457,910
Improvement of Rivers and Brooks	882,397	705,958	80,848	801,549
Institutions for Mental Defectives	17,000	17,587	292	16,708
Maternity and Child Welfare	5,897	6,465	—	5,897
Municipal Buildings	910,619	924,867	423,009	487,610
Museum and Art Gallery	6,203	6,203	5,741	462
Public Parks and Recreation Grounds	569,313	555,198	194,254	375,059
Police Stations	190,667	194,930	141,057	49,610
Public Libraries	123,122	123,122	79,459	43,663
Public Lighting	4,478	4,478	1,993	2,485
Sewerage Works	2,435,745	2,313,133	1,323,331	1,112,414
Street Improvements	3,391,395	3,411,542	1,418,294	1,973,101
Weights and Measures Offices	3,472	3,472	1,425	2,047
Wharves, Depots and Stables	128,373	128,207	62,164	66,209
Wharves, Depots, Stables, and Destructors	514,950	514,646	282,784	232,166
Costs of Issue of Corporation Stock (less Housing and Drainage Board)	843,845	843,845	336,385	507,460
Miscellaneous	611,226	611,188	398,326	212,900
Total—Non-Reproductive	£16,963,393	£16,721,214	£8,067,313	£8,896,080
*NOTE.—Balances of Loans (Col. 5) £36,114,565				
Add				
Loans to Local Authorities	1,894,347			
Amount invested or in the hands of the Treasurer	5,105,394			
Total Debt of the City (see Table 6) £43,114,306				
Grand Total	£53,002,198	£51,739,809	£16,887,633	*£36,114,565

DEBT OF THE CITY, 31st March, 1927.

TABLE 6

Distinguishing between—(a) FUNDED DEBT (*i.e.*, with a minimum life of 15 years).
(b) PARTLY FUNDED DEBT (*i.e.*, with a life of 5-15 years).
(c) FLOATING DEBT (*i.e.*, with a maximum life of 5 years).

	£	£	£	%
(a) FUNDED DEBT.				
ANNUITIES (capitalized at 25 years' purchase)—				
Gas	869,851			
Water	913,960			
		1,783,811		
STOCKS—				
2½% Stock (Redemption optional after 1926) ..	1,414,102			
3% Stock (.. .. . 1932) ..	949,324			
4½% Stock 1945/55	3,000,000			
5% Stock 1946/56	5,000,000			
3½% Stock (Redemption optional after 1946) ..	3,650,000			
3% Stock (.. .. . 1947) ..	1,912,799			
		15,926,225		
3% (1900 Electric Supply) Stock (Redeemable by Annual Instalments).. .. .		230,552		
MORTGAGES (Instalment Loans)		1,631,153		
			19,571,741	46
(b) PARTLY FUNDED DEBT.				
STOCKS—				
6% Stock 1936/46	4,882,700			
5½% Stock 1941/61	3,000,000			
		7,882,700		
Mortgages repayable after 31st March, 1932 ..		424,933		
			8,307,633	19
(c) FLOATING DEBT.				
Mortgages repayable on or before 31st March, 1932 ..		15,021,632		
Housing Bonds repayable on or before 31st March, 1932 ..		213,300		
			15,234,932	35
			£43,114,306	100

For the purpose of Table 15 the Partly Funded Debt shown above is considered to be funded to the extent of the 5½% and 6% Stocks and unfunded as to the remainder.

STOCK ISSUES.

TABLE 7.

Particulars of Stock.	Date of Issue.	Amount Issued.	Amount Redeemed and Cancelled.	Amount Outstanding.	Dividend Due.	Date of Redemption.		
						At the option of the Corporation.	Latest Date.	
1	2	3	4	5	6	7	8	
3½%	1881-1886	£3,750,000	£100,000	£3,650,000	1st Jan. & 1st July.	17th May, 1946	—	Inscribed at the Bank of England.
3%	1887-1895	2,000,000	87,201	1,912,799	do.	1st July, 1947	—	do.
2½%	1896-1900	1,550,600	136,498	1,414,102	do.	1st July, 1926	—	do.
3% (1900 Electric Supply)	1900	500,000	269,448	230,552	do.	—	*1st January, 1940	—
3% (1902)	1902	1,000,000	50,676	949,324	do.	1st July, 1932	—	Inscribed at the Bank of England.
6%	1920	4,882,700	—	4,882,700	do.	1st July, 1936	1st July, 1946	Registrar: City Treasurer, Birmingham
5½%	1921	3,000,000	—	3,000,000	1st April & 1st Oct.	1st October, 1941	1st October, 1961	do.
4¾%	1925	3,000,000	—	3,000,000	do.	1st October, 1945	1st October, 1955	do.
5%	1926	5,000,000	—	5,000,000	do.	1st October, 1946	1st October, 1956	do.
		£24,683,300	£643,823	£24,039,477				

*Repayable in half-yearly instalments—wholly taken up by Public Works Loan Commissioners.

TRADING UNDERTAKINGS.

TABLE 8.

Total Revenue, Working Expenses, Loan Charges, etc., for the Last Five Years.

UNDERTAKING.	Total Revenue.	Working Expenses.	Gross Profit.	Loan Charges.	Net Profit.	Net Loss.	Appropriation of Net Profit.			Contribution from Rates.	Amount standing to credit of Reserve Fund at end of financial year.	Amount standing to credit of Special Expenditure Account at end of financial year.
							To Rates (following year).	To Reserve.	To Special Expenditure Account.			
1	2.	3	4	5	6	7	8	9	10	11	12	13
ELECTRIC SUPPLY.	£	£	£	£	£	£	£	£	£	£	£	£
1922-23	1,049,080	571,569	477,511	370,350	107,161	—	12,500	24,661	70,000	—	127,759	102,234
1923-24	1,113,148	667,475	445,673	312,449	133,224	—	31,000	—	102,224	—	129,140	130,386
1924-25	1,181,575	735,809	445,766	356,396	89,370	—	31,000	—	58,370	—	104,441	69,937
1925-26	1,323,734	726,409	597,325	413,313	184,012	—	31,000	—	153,012	—	108,701	69,633
1926-27	1,538,300	882,940	655,360	482,605	172,755	—	31,000	—	141,755	—	113,539	67,727
GAS.												
1922-23	2,615,067	2,421,631	193,436	141,017	52,419	—	—	—	52,419	—	78,280	73,904
1923-24	2,529,823	2,356,322	173,501	131,245	42,256	—	42,256	—	—	—	78,963	62,267
1924-25	2,344,136	2,220,297	123,839	160,358	—	†36,519	†42,000	—	—	—	3,641	45,825
1925-26	2,395,870	2,123,817	272,053	185,656	86,397	—	41,200	—	45,197	—	2,672	10,664
1926-27	2,793,602	2,546,444	247,158	168,773	78,385	—	41,200	*67,652	37,185	—	71,352	12,366
TRAMWAYS.												
1922-23	1,528,123	1,104,554	423,569	182,331	241,238	—	—	41,238	200,000	—	34,696	Dr. 162,789
1923-24	1,504,995	1,091,231	413,764	182,117	231,647	—	27,000	52,134	152,513	—	35,871	Dr. 106,743
1924-25	1,625,974	1,175,988	449,986	191,904	258,082	—	40,000	118,082	100,000	—	74,059	Dr. 50,664
1925-26	1,730,330	1,276,167	454,163	195,106	259,057	—	40,000	—	219,057	—	75,429	Dr. 90,953
1926-27	1,766,366	1,357,277	409,089	202,069	207,020	—	40,000	—	167,020	—	78,005	Dr. 127,292
WATER.												
1922-23	667,058	305,098	361,960	427,968	—	66,008	—	—	—	70,000	—	—
1923-24	687,337	366,308	321,029	429,541	—	108,512	—	—	—	95,000	—	—
1924-25	708,955	340,605	368,350	425,386	—	57,036	—	—	—	65,000	—	—
1925-26	730,603	358,259	372,344	426,429	—	54,085	—	—	—	55,000	—	—
1926-27	739,117	353,949	385,168	424,000	—	38,832	—	—	—	55,000	—	—

† Met by transfer of £78,519 from Reserve Fund.

* Part of transfer of £312,172 Capital Expenditure previously charged to Revenue Account—£244,520 carried forward.

The charges for gas, electricity, and water are omitted in the various chapters on the trading undertakings, and they will be found below :

TRADING UNDERTAKINGS. TABLE 9.
CHARGES FOR COMMODITIES FOR LAST FIVE YEARS.
DOMESTIC PURPOSES.

	*†GAS. per 1,000 c.ft.	*ELECTRICITY. per unit.		WATER Rate in £ on rateable value.
		†Lighting.	Power.	
1922	s. d.	d.	d.	s. d.
1st Quarter	5 0	6½	3	3 0
2nd „	4 6	6	2½	3 0
3rd „	4 6	6	2½	3 0
4th „	3 10	6	2½	3 0
1923				
1st Quarter	3 10	5½	2½	3 0
2nd „	3 7	5½	2½	3 0
3rd „	3 7	5	2	3 0
4th „	3 1	5	2	3 0
1924				
1st Quarter	2 10	4½	1½	3 0
2nd „	2 10	4½	1½	3 0
3rd „	2 10	4½	1½	3 0
4th „	2 10	4½	1½	3 0
1925				
1st Quarter	2 10	4½	1½	3 0
2nd „	2 10	4½	1½	3 0
3rd „	3 2§	4½	1½	3 0
4th „	3 2	4½	1½	3 0
1926				
1st Quarter	3 2	4½	1½	3 0
2nd „	3 2	4½	1½	3 0
3rd „	3 8§	4½	1½	3 0
4th „	4 0§	5 §	2 §	3 0
1927				
1st Quarter	4 0	5	2	3 0
2nd „	3 6	4½	1½	3 0
3rd „	3 2	4½	1½	3 0
4th „	3 2	4½	1½	3 0

*Highest domestic rate. †Subject to a discount of 5% for prompt payment. §Increased during the quarter.

TABLE 10.

MINISTRY OF TRANSPORT. MOTOR TAXATION LICENCES.

STATEMENT SHOWING THE NUMBER OF LICENCES ISSUED AND THE AMOUNT OF DUTY RECEIVED FOR THE
FIVE YEARS ENDED 30TH NOVEMBER, 1926.

DESCRIPTION OF VEHICLE.	LICENCES ISSUED.					AMOUNT RECEIVED.				
	Year ended 30th November					Year ended 30th November				
	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926
Private Cars	10,666	14,051	17,450	23,733	29,434	£105,127	£131,513	£157,608	£187,317	£213,273
Cycles	18,839	22,295	25,762	34,745	41,942	33,172	37,001	40,432	43,381	46,053
Commercial Goods	6,644	7,708	8,784	10,703	12,172	84,960	91,986	104,132	113,956	127,568
Motor Hackneys	2,050	2,015	2,011	2,420	2,493	17,006	18,417	19,586	21,098	23,683
Exempt	90	119	146	162	163	—	—	—	—	—
Drivers' Licences	30,238	36,462	39,842	47,146	51,998	7,447	9,017	9,841	11,645	12,999
Miscellaneous	1,762	1,712	1,697	1,631	1,631	4,214	4,238	4,697	4,693	4,969
	70,289	84,362	95,692	120,540	139,833	251,926	292,172	336,296	382,090	428,545
Miscellaneous Receipts	—	—	—	—	—	431	392	576	499	574
TOTALS	70,289	84,362	95,692	120,540	139,833	£252,357	£292,564	£336,872	£382,589	£429,119

RATES.

TABLE 11.

THE AMOUNT IN THE £ LEVIED DURING THE FINANCIAL YEARS 1923-24 TO 1927-28.

PARISH.	1923-24			1924-25			1925-26			1926-27			1927-28 (Estimated)		
	Poor	Borough.	Total.	Poor	Borough.	Total.	Poor	Borough.	Total.	Poor	Borough.	Total.	Poor	Borough.	Total.
BIRMINGHAM															
Old City	s. d. 5 7½	s. d. 10 4½	s. d. 16 0	s. d. 5 1½	s. d. 10 10½	s. d. 16 0	s. d. 4 11	s. d. 11 1	s. d. 16 0	s. d. 4 7	s. d. 11 5	s. d. 16 0	s. d. 4 8	s. d. 11 4	s. d. 16 0
Aston Manor	5 7½	10 1½	15 9	5 1½	10 10½	16 0	4 11	11 1	16 0	4 7	11 5	16 0	4 8	11 4	16 0
Erdington	5 7½	7 11½	13 7	5 1½	8 8½	13 10	4 11	8 11	13 10	4 7	9 3	13 10	4 8	9 10	14 6
King's Norton and Northfield	5 7½	9 2½	14 10	5 1½	10 0½	15 2	4 11	10 3	15 2	4 7	10 9	15 4	4 8	10 10	15 6
Yardley	5 7½	9 10½	15 6	5 1½	10 4½	15 6	4 11	10 7	15 6	4 7	10 11	15 6	4 8	11 4	16 0
HANDSWORTH	4 11½	10 0½	15 0	3 5½	10 6½	14 0	3 3	10 9	14 0	2 11	11 1	14 0	4 7	11 4	15 11

The Borough Rate Precept made by the Council in March, 1926, for the year 1926-27, was £2,925,068, which was equivalent to 11s. 3.24d. in the £, after allowing for statutory deductions and losses.

TABLE 12. DIFFERENTIAL RATING.—To be allowed to the areas taken over under the Birmingham Extension Order, 1911—1927 : Erdington 2/2, King's Norton and Northfield -/8, Yardley -/6, Handsworth -/4 ; 1928, Erdington 1/6, King's Norton and Northfield -/6 ; 1929, Erdington 1/ ,King's Norton and Northfield -/4 ; 1930, Erdington -/6, King's Norton and Northfield -/2.

TABLE 13.

GRAPH
SHOWING
LOANS RAISED
AND
DEBT
OUTSTANDING

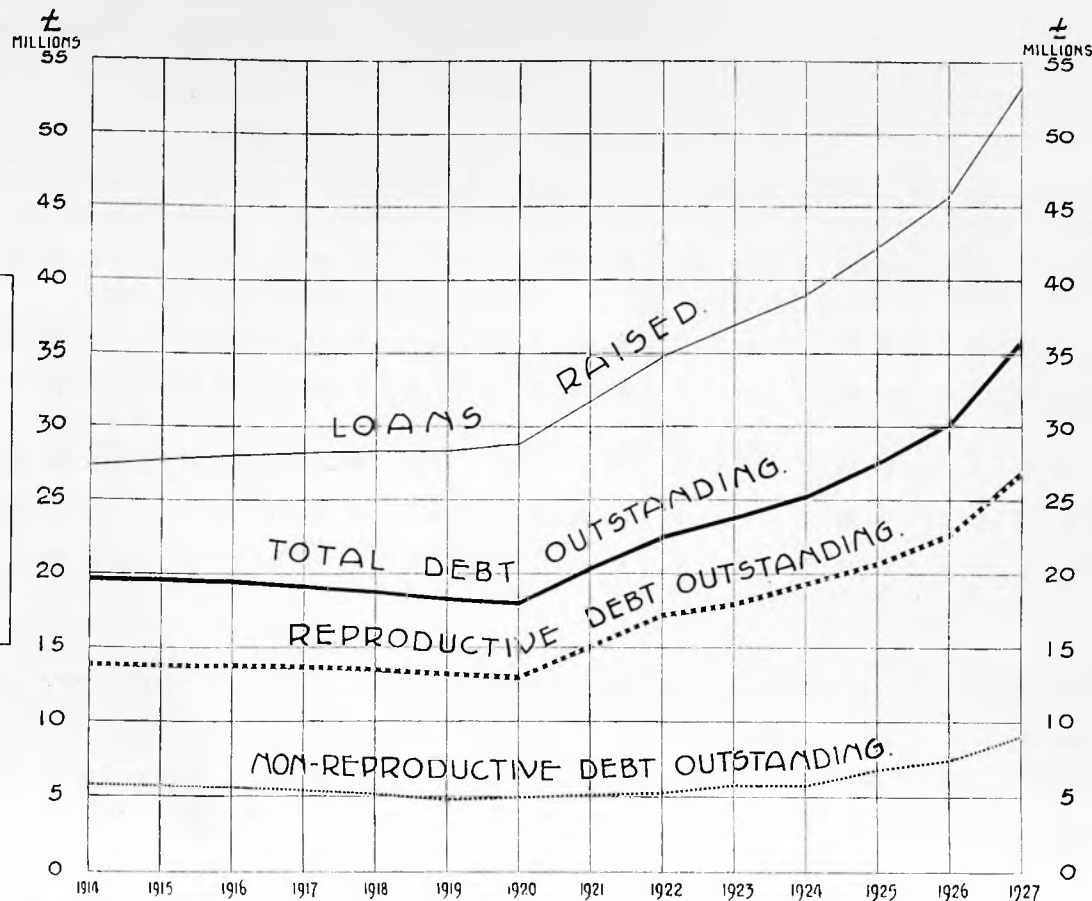


TABLE 14.

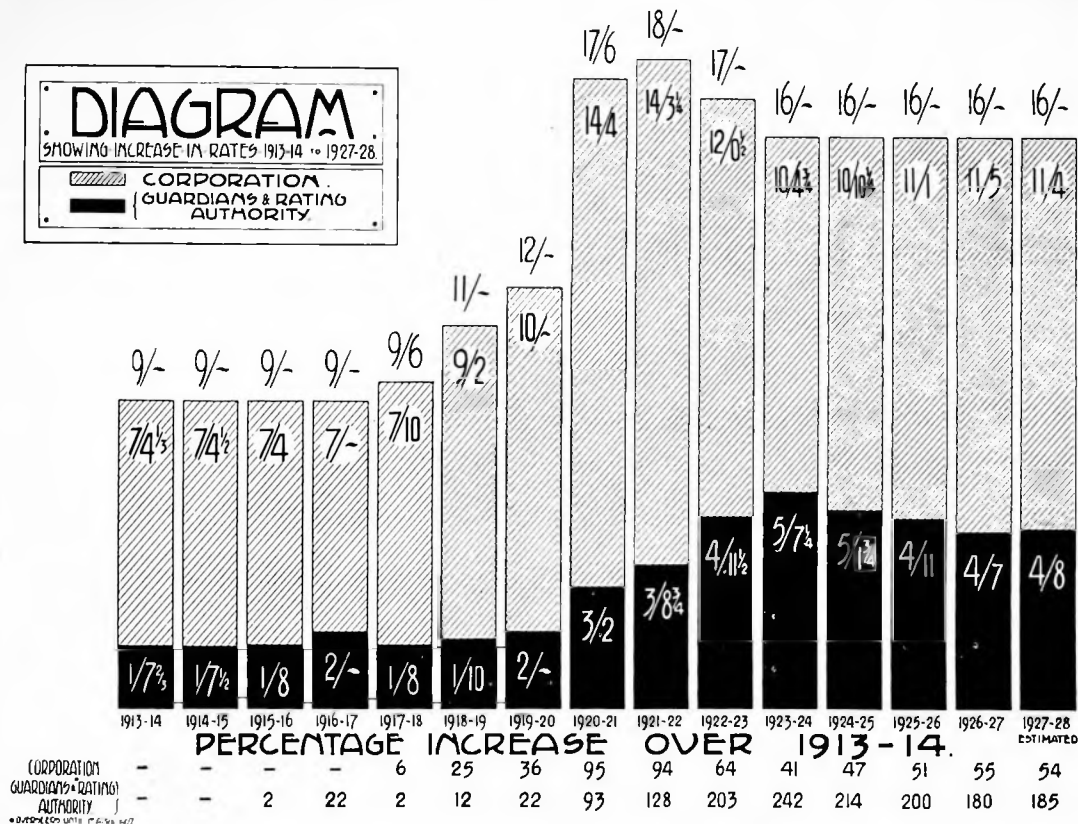
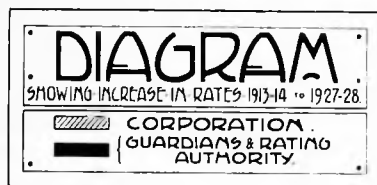


TABLE 15.

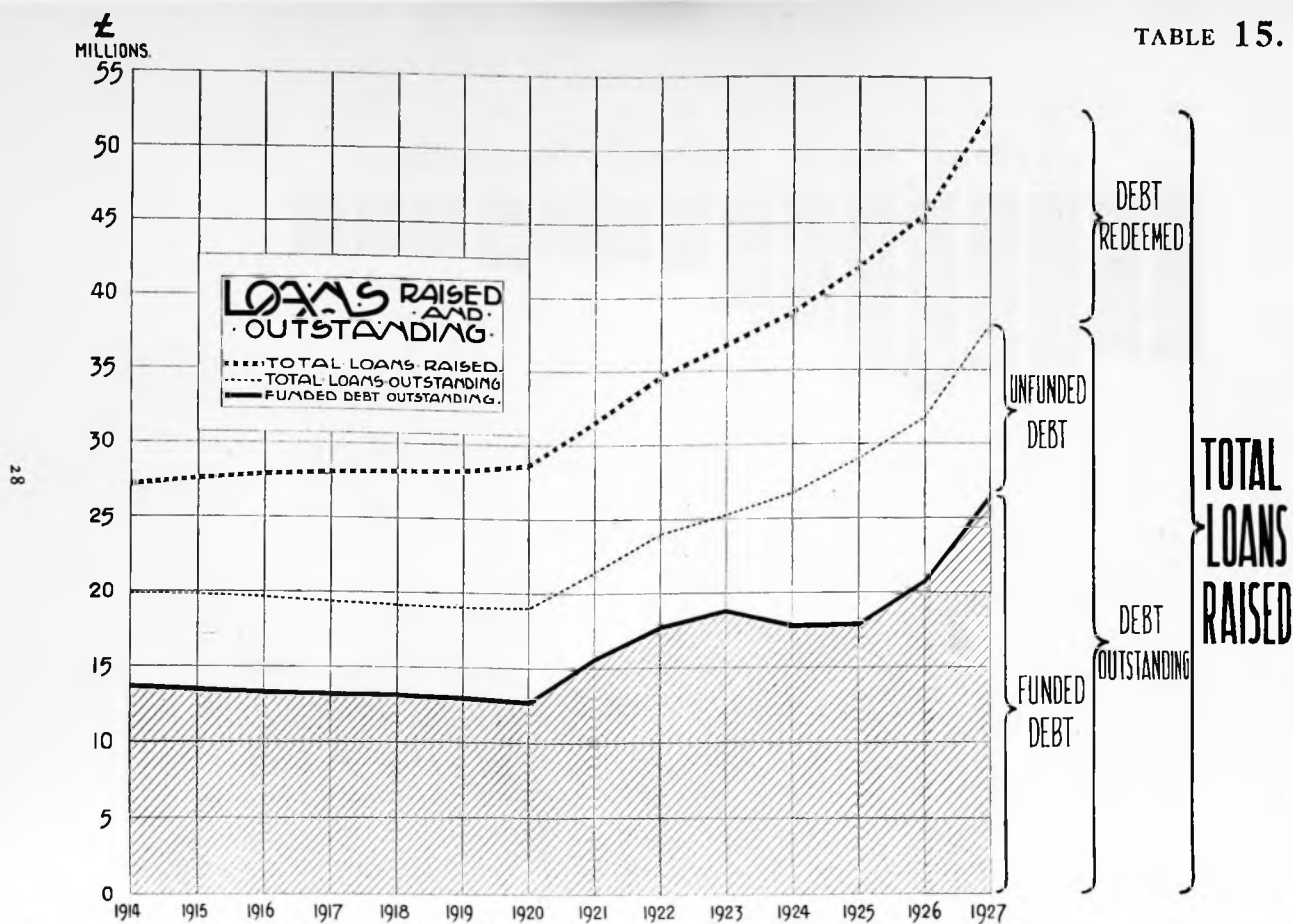


TABLE 16.

AGGREGATE BALANCE SHEET, 31st March, 1927.

LIABILITIES. LOAN AND CAPITAL ACCOUNTS.

FUND OR ACCOUNT. 1	Blue Book Page. 2	Loan Debt.			Debt extinguished or provided for. 6	Reserve Funds. 7	Sundry Creditors. 8	Sundry Funds. Balances. 9	Amount due to Treasurer. 10	LIABILITIES. INCOME ACCOUNTS.				GRAND TOTAL. 15
		Annuities. 3	Stock. 4	Mortgages and Housing Bonds. 5						Sundry Creditors 11	Sundry Funds. 12	Amount due to Treasurer 13	Balances of Income in excess of Expenditure. 14	
1 Borough Fund and Rate ...	128-134		11,119,726 9 3	5,301,187 15 7	8,956,963 10 11			84,813 19 7		531,041 2 2	206,766 11 8		14,215 1 9	26,214,714 10 11
2 Birmingham Superannuation ...	140						2,472 15 4	117,766 1 9						120,238 17 1
3 Fire Brigade Pension ...	144							63,803 3 11						63,803 3 11
4 Suspense ...	148													271,615 2 11
5 Housing (Assisted Scheme) 1919 ...	156		3,081,983 2 9	272,210 2 3	214,788 8 3			1,502 8 3		47,648 18 11	271,615 2 11			3,636,183 5 9
6 Agricultural and Small Holdings ...	164			243,498 9 1	10,417 10 8					3,218 9 5	18,050 5 4			272,584 5 0
7 Mortgages ...	174-176			4,144,146 3 3				275,353 17 3	29,086 5 5		71,790 16 8	14,748 10 3	701 5 7	4,520,377 2 7
8 Loans Fund ...	200		1,387,596 17 1		336,385 3 3						74,437 3 4			1,798,419 3 8
9 Electric Supply ...	212		3,472,239 8 2	1,782,723 10 7	2,280,288 0 7	113,538 17 3	162,956 15 6			218,379 6 8	67,726 13 8	110,352 7 0	31,000 0 0	8,229,204 19 5
10 Gas ...	228	869,850 18 9	555,781 0 10	1,272,748 14 4	2,027,612 13 3	71,351 11 9		17,232 12 10		357,943 1 0	17,365 10 0	604,785 0 7	285,719 19 9	6,080,391 3 1
11 Municipal Bank ...	234									7,809,317 5 11	84,691 15 8		15,301 5 1	7,909,310 6 8
12 Tramway ...	250		730,905 11 4	1,285,533 3 7	1,483,773 10 7	78,004 12 2				121,274 8 3		110,804 14 1	40,000 0 0	3,850,296 0 0
13 Water ...	266	913,960 6 3	3,691,244 2 3	2,988,970 10 4	1,630,406 8 1		16,092 16 8		19,061 8 3	315,401 17 1	1,500 0 0	63,335 13 5	16,650 15 0	9,656,623 17 4
		1,783,811 5 0	24,039,476 11 8	17,291,018 9 0	16,940,635 5 7	282,895 1 2	171,522 7 6	560,472 3 7	48,147 13 8	9,404,224 9 5	813,943 19 3	904,026 5 4	403,588 7 2	72,623,761 18 4

NOTE. Reconciliation of "Debt extinguished or provided for"—
 Total of Column 6, above 16,940,635 5 7
 Add—Proceeds of Sale of Properties (Blue Book, p. 467) 585,309 6 5
 Loans in excess of Capital Requirements paid into Sinking Fund (Blue Book, p. 467) 402,486 8 11
 987,795 15 4
 Total, as per Col. 10, Blue Book, p. 467 £17,928,431 0 11

ASSETS. LOAN AND CAPITAL ACCOUNTS.

FUND OR ACCOUNT. 1	Blue Book Page. 2	Capital Expenditure. 3	Investments.		Loans to other Local Authorities. 6	Sundry Debtors. 7	Sundry Funds. Balances. 8	Amount in hands of Treasurer. 9	Sundry Debtors. 10	Stock of Materials, Plant, etc. 11	Sundry Funds. 12	Amount in hands of Treasurer. 13	Balances of Expenditure in excess of Income. 14	GRAND TOTAL. 15
			Reserve Funds, &c. 4	Sinking Funds. 5										
1 Borough Fund and Rate ...	129-135	23,194,913 19 9	62,115 6 7	1,475,344 15 4			52,950 5 3	677,367 8 5	389,739 17 5	97,919 9 6	109,254 10 11	155,108 17 9		26,214,714 10 11
2 Birmingham Superannuation ...	141		49,535 0 4			4,660 9 5		66,043 7 4						120,238 17 1
3 Fire Brigade Pension ...	145		59,303 15 1					4,499 8 10						63,803 3 11
4 Suspense ...	149										50,000 0 0	221,615 2 11		271,615 2 11
5 Housing (Assisted Scheme) 1919 ...	157	3,273,892 14 0	245,587 18 10					51,003 8 8	43,288 2 8		1,503 0 0	20,908 1 7		3,636,183 5 9
6 Agricultural and Small Holdings ...	165	253,627 19 9						288 0 0	16,004 5 2	2,064 0 1				272,584 5 0
7 Mortgages ...	175-177		3,116,538 2 8	345,976 6 6	1,056,694 6 0			621,330 3 9			2,163 0 1	69,627 16 7		4,520,377 2 7
8 Loans Fund ...	201	843,845 6 3		199,851 3 6	837,653 8 0			242,334 9 7			44,202 0 10	30,235 2 6		1,798,419 3 8
9 Electric Supply ...	213	7,580,753 1 3	87,518 10 5	1,500 0 0				131,975 0 5	334,608 19 7	92,849 7 9	557 2 8	12,365 10 0		8,229,204 19 5
10 Gas ...	229	3,988,898 11 5	87,486 4 5	360,615 6 6			40,364 15 0	331,312 14 5	726,702 4 9	626,188 13 11	5,589,445 12 1	697,133 5 9		6,080,391 3 1
11 Municipal Bank ...	235								1,612,313 2 0	10,418 6 1				7,909,310 6 8
12 Tramway ...	251	3,408,576 10 6	42,922 13 7						126,717 13 7	36,128 16 10	108,657 18 1	127,292 7 5		3,850,296 0 0
13 Water ...	267	9,180,300 7 6		45,995 16 9			6,637 6 9	26,802 0 10	335,774 2 5	61,114 3 1				9,656,623 17 4
		51,724,808 10 5	3,751,007 11 11	1,337,528 8 7	1,894,347 14 0	4,660 9 3	105,982 7 0	2,279,673 15 10	3,495,199 11 7	899,211 18 6	5,924,417 14 0	1,206,993 17 1		72,623,761 18 4

9th July, 1927.

J. R. JOHNSON, F.S.A.A., Treasurer of the City.

HOWARD SMITH, THOMPSON & CO., Chartered Accountants,
 Auditors appointed by the Finance Committee.

RATING, VALUATION, AND ASSESSMENT.

In Birmingham, the area of the City is the rating area under the Rating and Valuation Act, 1925. It has also been constituted the assessment area, and consists of the parishes of Birmingham, Handsworth, and the added area of Perry Barr.

The City Council, as the rating authority, appointed a Rating and Valuation Committee responsible for the preparation of Valuation Lists, and the making and levying and collection of rates. The Town Clerk has been appointed the clerk to the rating authority and the City Treasurer the chief rating officer, the latter having under his control the rating and valuation staff of the city.

The Assessment Committee, also appointed by the City Council, consists of fifteen members—eight members of the City Council, three nominees of the Birmingham Board of Guardians, one nominee of the West Bromwich Board of Guardians, and three independent persons. The duties of this committee are to supervise, approve, and keep revised the valuation lists, and consider and determine objections to valuations, and the staff of the Committee is distinct from that of the rating authority.

The first new valuation will come into force in Birmingham on April 1st, 1928, and the existing Poor and Borough Rates levied in the City will be merged into a consolidated rate known as the General Rate. For Poor Law purposes the City of Birmingham is within two Unions, the parish of Birmingham being within the Birmingham Union and the parishes of Handsworth and Perry Barr within the West Bromwich Union.

Chapter III.

THE TOWN HALL.

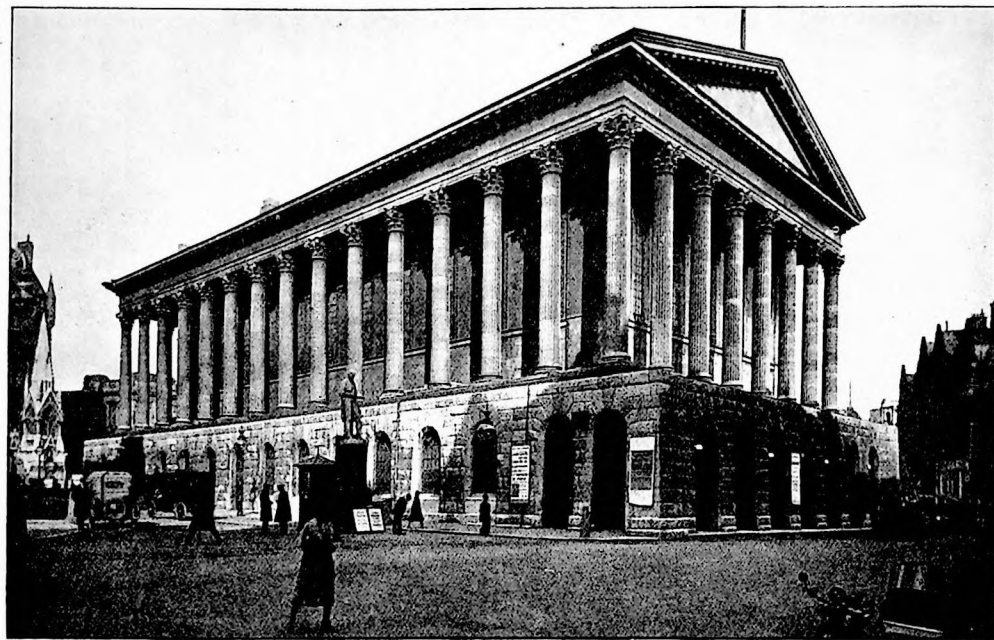
THE recent re-opening of the Town Hall after interior reconstruction and decoration invites citizens to recall the history of a building which is the centre of civic unity and an impressive witness to civic ideals.

Up to 1827 Town's Meetings had been held in "the Chamber over the Cross," and subsequently at the public offices in Moor Street, or at "The Shakespeare Tavern" in New Street, or at Beardsworth's Repository in Cheapside. In this year the ratepayers petitioned the Commissioners of the Birmingham Street Act to provide a suitable building in which to hold public or town's meetings, and in 1828 the Town Improvement Act authorized various schemes, including the building of a new Town Hall.

Various sites in Bennett's Hill and elsewhere were examined, and in 1830 it was decided to build in Paradise Street, and a site of 6,400 square yards was acquired for £17,521.

The Design of Joseph Hansom.

Mr. (later Sir) Charles Barry, afterwards to become famous as the architect of the Houses of Parliament, but justly remembered in Birmingham for his work on King Edward's High Schools and the older portion of the Birmingham and Midland Institute, submitted a design, but it was not approved, and the design of Joseph Hansom was accepted. Mr. Hansom was an inventor as well as an architect. His name became familiar by his design of a "patent safety cab," known to past generations as the "Hansom." He was born in 1803, lived until 1882, and designed many well-known churches, one of the best of which is St. Walburge's at Preston. But he never surpassed the simplicity and dignity of Birmingham's Town Hall, the main lines of which were obviously modelled on the Temple of Jupiter Stator at Rome.



THE TOWN HALL.

The building was commenced in April, 1832, and was finally completed, under the supervision of a local architect, in 1851, when it was transferred from the Street Commissioners to the Town Council. The total cost of the building, as completed in 1851, has been estimated at £52,000, apart from the site, fittings, and organ. Hansom, however, had little reason to remember with satisfaction his share in the construction. The terms imposed on him required him to become bond for the builders, and he went bankrupt.

Mendelssohn's Memorable Visit.

The organ (by William Hill) cost about £4,000. It was the property of the General Hospital, but became the property of the Corporation in 1922. The Triennial Musical Festivals were inaugurated in 1768, and in 1832 the General Hospital, by a contribution of £1,200 to the building fund, acquired the right to use the hall every third year for the Musical Festivals. The first festival given there was in 1834, and was continued triennially until it was finally abandoned during the war. Mendelssohn made his first visit in 1837, and in 1846 his production of "Elijah," specially written for the occasion and conducted by the composer, made the festival of that year memorable.

Numerous changes and improvements in ventilation, warming, and lighting (electric light was first installed in 1882) have been effected since 1852, but the recent and more drastic re-construction and re-decoration was long overdue.

A volume would be required to summarize the many political and other meetings, together with concerts, bazaars, and conversaziones that have been held in the Town Hall from 1834 onwards. Such a volume would tell of the public, municipal, social, intellectual, and artistic life of Birmingham for nearly a century. The "old" Town Hall, the interior of which was decorated with mural paintings by Birmingham art students illustrating the principal events in the history of the city, has resounded to the oratory and enshrined the aspirations of three generations of citizens; it has given hospitality and a platform to many famous men and to many noble causes.

The re-constructed and re-decorated hall does not close that crowded chronicle of civic life—it consummates a proud past, and points, in a new chapter, to the legacy of a great tradition.

Chapter IV.

PUBLIC HEALTH.

THE many and varied activities of the Public Health Department, with the Medical Officer of Health at its head, entail the employment of the following staff of 993 :

Assistant M.O.H.'s	...	...	3	City Analyst	...	...	1
Child Welfare Doctors (whole time)	...	...	5	Assistant Analysts...	...	...	3
Child Welfare Doctors (part time)	...	...	21	Infant Welfare Visitors	...	...	74
Hospital Doctors	...	...	16	Tuberculosis Visitors	...	...	11
Hospital Nurses	...	...	278	General Health Visitors	...	...	19
Hospital Maids	...	...	206	Sanitary Inspectors	...	...	48
City Bacteriologist	...	...	1	Clerks	...	...	65
City Assistant Bacteriologist	...	...	1	Other Officers & Workmen	...	...	240

Thirty-two sanitary inspectors investigate complaints of insanitary conditions. Systematic inspection of houses is undertaken, and in this way thousands of nuisances and defects are brought to light every year.

Immediate steps are taken to abate nuisances and get defects remedied by service of notice on the responsible person, the following being the chief requirements of the orders served : general repairs to houses, cleansing of walls and ceilings, provision of better ventilation, provision of better water supply, improvement of closet arrangements, repairing and cleansing of drains, paving and cleansing of yards, removal of animals from unsuitable places, and removal of rubbish and filth.

What the Special Inspectors are Doing.

Special inspectors (sixteen in number) visit common lodging houses and houses let in lodgings—i.e., furnished and let to two or more families—to see that they are kept clean and are not overcrowded ; inspect canal boats ; inspect courtyards to ensure cleanliness ; watch factory chimneys and take action against persons who break the regulations as to the emission of black smoke ; inspect milkshops to see that the milk is not kept under dirty conditions ; visit workshops to ensure that the sanitary arrangements are satisfactory ; purchase samples of food and drugs to check adulteration ; and observe shops to see that the regulations are carried out as to early closing and other matters.

Sanitary Inspectors and Infectious Diseases.

Cases of scarlet fever, diphtheria, enteric (typhoid) fever, erysipelas, etc., notifiable by the doctor in attendance, are at once visited by a sanitary inspector, who investigates the sanitary condition of the premises, makes arrangements for disinfection, gives instructions for children to be kept away from school where necessary, and, in occasional instances, for older people to absent themselves from work. All cases of diphtheria are removed to one of the City hospitals if the doctor so desires. Cases of scarlet fever are also taken there if the accommodation at home is insufficient. In cases of enteric fever which require removal, arrangements are made for their admission into one of the general hospitals.

Bacteriological examinations are made free of charge at the City Bacteriological Laboratory, Lodge Road, and are found of great assistance to doctors in the diagnosis of such diseases as diphtheria, pulmonary tuberculosis, enteric fever, and others.

Diphtheria anti-toxin, which has proved so efficacious, is issued free of charge to doctors who need it from the larger police stations, as well as from the Council House. It has recently become possible to protect children against diphtheria in somewhat the same way as they are protected against smallpox, by means of vaccination, and the department have now made arrangements for young children, whose parents are willing, to be immunized in this manner.

Parents to Tell Teacher.

When measles, whooping cough, chickenpox, or mumps occurs in a house in which there are school children the parents are required to notify the head teacher, who, in turn, informs the Public Health Department. The home is visited by one of the nurses who act as health visitors, and she gives advice where necessary as to the nursing of the patient, and instructions as to which, if any, of the children in the house must stay away from school.

Infectious Hospitals.

There are two City hospitals for the treatment of cases of scarlet fever and diphtheria—one in Yardley Road, Little Bromwich, where there is

accommodation for 466 patients, and one in Lodge Road, Winson Green, where there are 253 beds. Last year 984 cases of scarlet fever and 1,487 of diphtheria were treated at these hospitals.

For the disinfection of clothing and bedding which might carry infection there is a disinfecting station at Bacchus Road, Winson Green, where articles are disinfected by exposure to super-heated steam.

Limiting the Ravages of Consumption.

Tuberculosis in one form or another causes an appalling amount of sickness and mortality, and a very large amount of effort has been expended in trying to limit its ravages. Every case has to be notified to the Medical Officer of Health by the doctor in attendance, and promptly a visit is paid by a tuberculosis visitor to advise the patient as to what steps he can take to improve his own health, to prevent his relatives from catching the complaint, and also to enquire whether anyone else in the household is unwell and possibly already slightly affected by the disease.

If doctor and patient desire it, an appointment is made for the patient to be examined at the Broad Street Dispensary by one of the Tuberculosis Medical Officers, who verifies the diagnosis and decides the treatment necessary. Most new cases examined are recommended for admission to one of the City Sanatoria. There are four of these—one at Yardley Road, Little Bromwich; one at West Heath, near Northfield; one at Romsley Hill, Clent; and one at Salterley Grange, near Cheltenham; the total number of beds provided being over 600.

During his stay in the sanatorium the patient is not only treated for his illness, but is also further instructed as to how he can keep well when he returns home, and what precautions he must take in the interests of the people with whom he lives and works.



YARDLEY ROAD SANATORIUM.

Periodical Visits to Consumptives.

After return from the sanatorium, treatment is continued for a time as an out-patient at Broad Street Dispensary, and when that is completed the patient is urged to see the doctor there from time to time. He is also visited periodically at his home by the tuberculosis visitor until a permanent cure has been established, perhaps after a period of several years.

A good many tuberculosis patients live under over-crowded conditions, and where it is practicable the department loans out an open-air shelter for the patient's use, especially to sleep in. Beds are also let on hire-purchase or loan in cases where the patient could not otherwise have a bed to himself.

Every care is taken to guard against the spread of tuberculosis through the use of milk from infected cows. All cows kept in the City are regularly examined by the Corporation's veterinary surgeons, and any which are found to be tubercular are removed from milking. In addition to this, samples are taken of all milk coming into the City from the country, and if any is found to be tubercular the cows at the farm from which it came are examined. An arrangement has also been made with a number of farmers for cows to be tested by the Corporation's veterinary surgeons, and any which show tuberculosis are removed at once from the herds, so that the herds can be certified as always being tubercle free.

All this work has not been in vain. During the past ten years the prevalence of the disease, as shown by the new cases notified, has been reduced by about one-half, while the mortality has been reduced by about one-third.

Maternity and Child Welfare.

Not so very many years ago it was quite usual for about one-fifth of all the babies born in Birmingham to die before they were a year old, and this serious loss of life has led to special steps being taken to prevent so high a mortality.

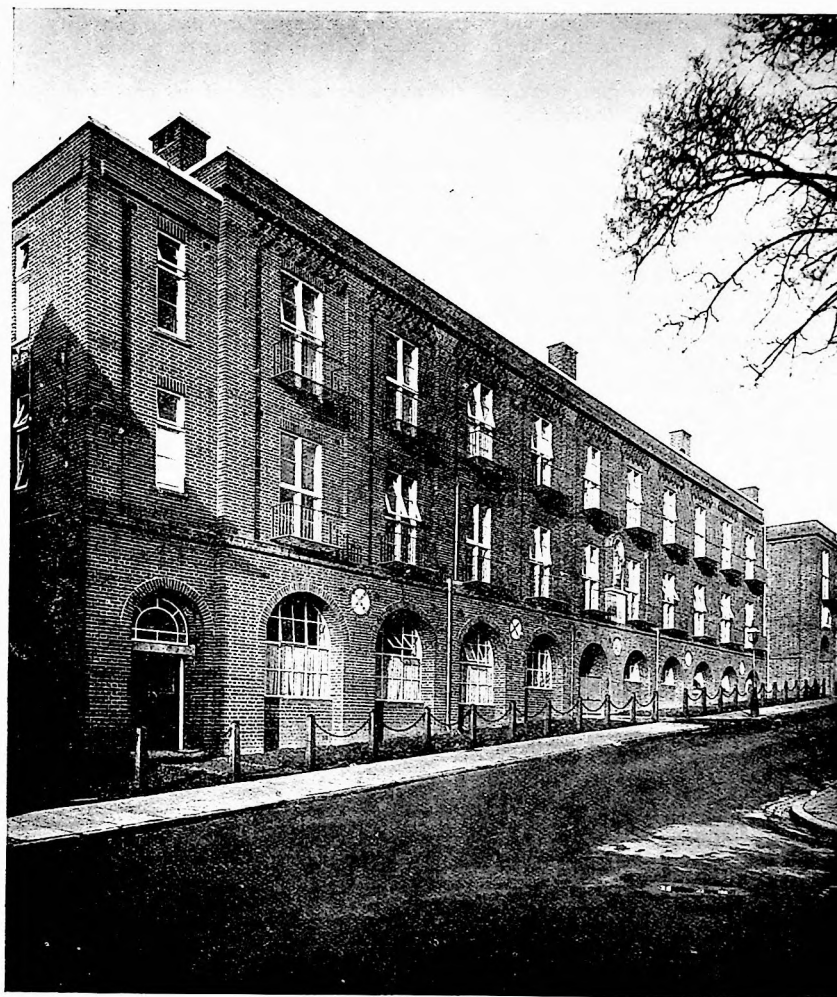
In 1915 an Act of Parliament was passed making it compulsory upon the father or any person in attendance on the mother to notify the Public Health Department for the district immediately a baby is born. In Birmingham, when the baby is a few days old, a visit to its home is paid by an Infant Welfare Visitor—a trained nurse who goes to give advice, where necessary, as to the best steps to be taken to ensure the baby grows up to be strong and healthy. She also invites the mother to bring her baby to the nearest Welfare Centre, where she can see the doctor in charge about her own health and the health of her child, and where the baby can be weighed at frequent intervals.

At these Welfare Centres—there are now twenty-five of them—clinics are also held for expectant mothers, who are able in this way to get medical advice which may make all the difference between a safe and satisfactory confinement and a dangerous one. Health talks are also given while they are at the centres, and classes are held in cookery, sewing, and housewifery.

Where Artificial Sunlight can be Obtained.

Four years ago, through the generosity of the Carnegie United Kingdom Trust, the Carnegie Institute in Hunters Road, Handsworth, was opened as a model welfare centre.

In addition to the usual programme of ante-natal clinics, infant consultations, cookery, sewing, and mothercraft classes, there are also dental



THE CARNEGIE INFANT WELFARE INSTITUTE, HANDSWORTH.

clinics for mothers and children whose teeth need attention ; X-ray clinics for the diagnosis of rickets and other infantile complaints ; breast feeding clinics for the restoration of breast milk in mothers who have been unable to breast-feed their babies ; light clinics, where the benefits of artificial sunlight can be obtained ; and a small hospital ward where obscure cases of ill-health in infants or their mothers can be investigated.

These special clinics are open to cases residing in any part of the City who are sent to them by the doctors attached to the centres they attend for ordinary purposes.

All these efforts to reduce the mortality amongst infants and young children have met with a large measure of success, the infant mortality rate—that is the number of infants who die out of every thousand born—having fallen from about 150 per 1,000 twenty years ago to less than half that amount last year.

Health Statistics.

An important part of the work of the department is the collection and publication of health statistics. These are of great value as showing year after year the improvement or otherwise in the number of deaths and the prevalence of certain forms of illness. They are also of great value for comparing the healthiness of various areas of the city one with another, thus indicating which are the districts that are most in need of attention.

The striking fall in the general death-rate for the city is indicated in the figures below :

MEAN DEATH-RATE FROM ALL CAUSES PER 1,000 OF THE POPULATION.

1871-1875 (Old City Area)	...	...	...	...	25.2
1876-1880	„	„	...	...	22.8
1881-1885	„	„	...	...	20.7
1886-1890	„	„	...	...	20.2
1891-1895	„	„	...	...	20.3
1896-1900	„	„	...	...	20.5
1901-1905 (Present Area)	...	...	...	...	16.5
1906-1910	„	„	...	...	15.0
1911-1915	„	„	...	...	14.6
1916-1920	„	„	...	...	13.4
1921-1925	„	„	...	...	11.5

The diagram (page 37) shows the division of the City into its thirty electoral wards, such wards being used for the purpose of tabulating the health statistics of the City.

When the death-rate in the different wards is considered it is found that great variations in healthiness still exist. The mean death-rate in the five years 1921-1925 was as follows :

Central Wards.

St. Paul's	...	...	14.5	St. Martin's and Deritend	...	15.0
St. Mary's	...	...	16.6	Market Hall	...	14.0
Duddeston and Nechells	...	...	13.4	Ladywood	...	13.1
St. Bartholomew's	...	...	14.6			

Middle Ring.

Lozells	...	...	12.2	Sparkbrook	...	...	11.1
Aston	...	...	12.5	Balsall Heath	...	...	12.0
Washwood Heath	...	...	10.0	Edgbaston	...	...	11.0
Saltley	...	...	9.4	Rotton Park	...	...	11.5
Small Heath	...	...	10.3	All Saints'	...	...	11.8

Outer Ring.

Soho	11.3	Sparkhill	9.8
Sandwell	9.3	Moseley and King's Heath...	10.9
Handsworth	9.7	Selly Oak	8.9
Erdington North	9.8	King's Norton	8.4
Erdington South	9.1	Northfield	8.9
Yardley	8.9	Harborne	9.6
Acocck's Green	9.1		

Fortunately, the mortality in the less healthy wards is improving more rapidly than in the other parts of the City, as can be seen from the figures below :

MEAN DEATH-RATE PER 1,000.

	1912-1915.	1921-1925.	Decrease.
Central Wards ...	20.6	14.5	30%
Middle Ring ...	13.3	11.2	16%
Outer Ring ...	10.5	9.5	10%



It will be seen that fifteen years ago the death-rate in the bad wards was twice as high as in the good ones, while now it is only half as high again. There can be no doubt that a large part of the improvement shown in the foregoing figures is the direct result of the public services carried out by the Corporation through its Health Department.

The head offices are in the Council House, Congreve Street, where all enquiries and complaints should be addressed.

Chapter V.

PUBLIC WORKS AND TOWN PLANNING.

THE principal duties carried out by the Public Works and Town Planning Department, under the City Engineer and Surveyor, are the construction, maintenance, and cleansing of the public highways and sewers; widening and reconstruction of streets and bridges; lighting of streets; prevention of the pollution of streams; administration of the building bye-laws; erection of municipal houses; preparation and administration of town planning schemes and advisory work on regional town planning; care of public buildings, and preparation of plans and supervision of buildings for other departments.

There is an Assistant City Surveyor and also three Chief Assistants having charge of the three divisions into which the City is divided for administrative purposes. The three divisions are sub-divided into two districts under the general supervision of a District Surveyor and Engineer, with a Road Superintendent and Sewer Superintendent in charge of the working gangs. Building bye-laws administration and constructional work require a chief building surveyor, with a deputy and six district building surveyors.

Road Construction and Widening.

Increase in speed, volume, and weight of vehicular traffic in recent years has raised new problems in road construction. The method of laying broken stone and rolling it in with the application of water has been practically abandoned, as it rapidly disintegrates under modern traffic conditions. Broken slag or stone coated with refined coal-gas tar or bituminous compounds have been substituted, and the surfaces of roads so constructed have been sealed and made practically dustless by the yearly application of hot tar or bituminous mixtures.

Experiments to determine the best kind of material for different conditions of traffic, gradient, etc., have been carried out, and the fullest advantage taken of all new methods and inventions. The department has acquired and worked a great mound of old cold blast slag at Albion, part of the material being made into tarred macadam at the Corporation Depôts and part being used for road foundation.

In Birmingham heavy traffic is catered for by roads constructed of granite sett, wood block, grit sett, durax sett, and natural asphalt paving. For moderate traffic concrete and bituminous concrete roads are laid, and light traffic is carried over six inches Portland cement concrete or three inches tarred slag macadam.

The problem of widening of streets and roads to meet modern needs has been courageously tackled. In 1918 the City Council approved a scheme for the widening of the great radial roads to 110 or 120 feet, providing for two carriageways divided by a tram track (sleeper construction), and, of course, two footways, with grass margins and trees.

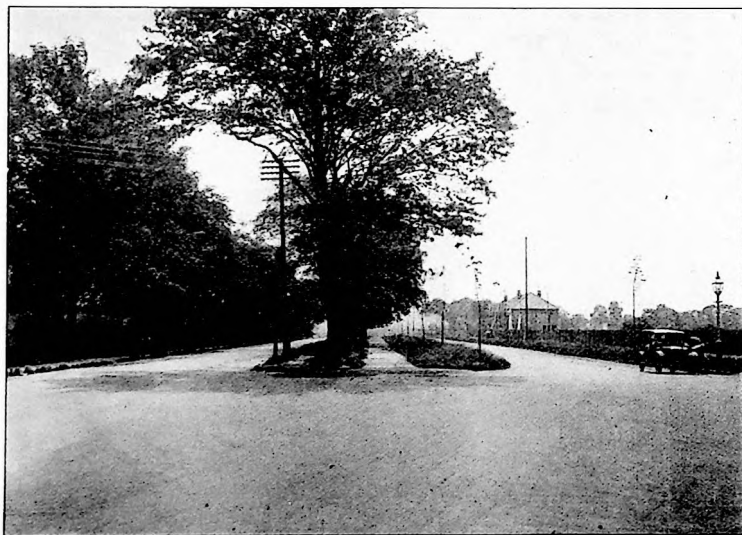
A local Act enables the Corporation to lay down the line of the future improvement upon a plan and require the owner to sell the necessary land to them whenever it becomes unbuilt upon. As much of the property abutting upon these main roads is so old as to involve demolition, the Corporation have been able to pursue a policy of gradual purchase which has not been unduly burdensome to the ratepayers. Provision is made in all town planning schemes for the widening of existing roads and the making of new arterial and secondary roads.

Outer Ring and Arterial Roads Programme.

In the early stages of town planning it was found desirable to provide for an outer ring road, about three and a half miles from the centre of the City, to be made partly by the widening of existing roads and partly by constructing entirely new lengths of roads. The total length is about twenty-four miles, and a considerable portion has already been made. A long programme of widenings and construction has been carried out in recent years partly by schemes in relief of unemployment.

The most important and latest carried out under the supervision of the City Engineer is the new £600,000 arterial road between Birmingham and Wolverhampton—a scheme suggested to local authorities in 1908, delayed to 1914, then shelved till 1919, when it was again revived. In 1922, upon a promise of the Government to pay sixty per cent. of the cost, the scheme was approved, plans were finally agreed upon by the local authorities concerned in September, 1923, estimates of the total expenditure involved submitted to the City Council in February, 1924, and a tender for the work accepted.

The road, which was opened by the Prince of Wales in November, 1927, is about nine and a half miles long, and passes through Oldbury,



STRATFORD ROAD, HALL GREEN.

Halesowen, Rowley Regis, Dudley, Tipton, and Coseley, making a total distance from the centre of Birmingham to the centre of Wolverhampton of fifteen miles. The route adopted has caused heavy expenditure in building seven bridges, but has resulted in saving much money in the acquirement of property and re-housing. Sharp bends have been avoided, and only 60 feet of the 100 feet between fences have been utilized, a 20 feet verge being left on both sides for possible future widening, 40 feet being carriageway and 10 feet each side footpath.

Railway, Canal, and River Bridges.

The widening and reconstruction of bridges on heavily trafficked routes has also been carried out during the past five years, mainly by schemes for relief of unemployment aided by Government grants.

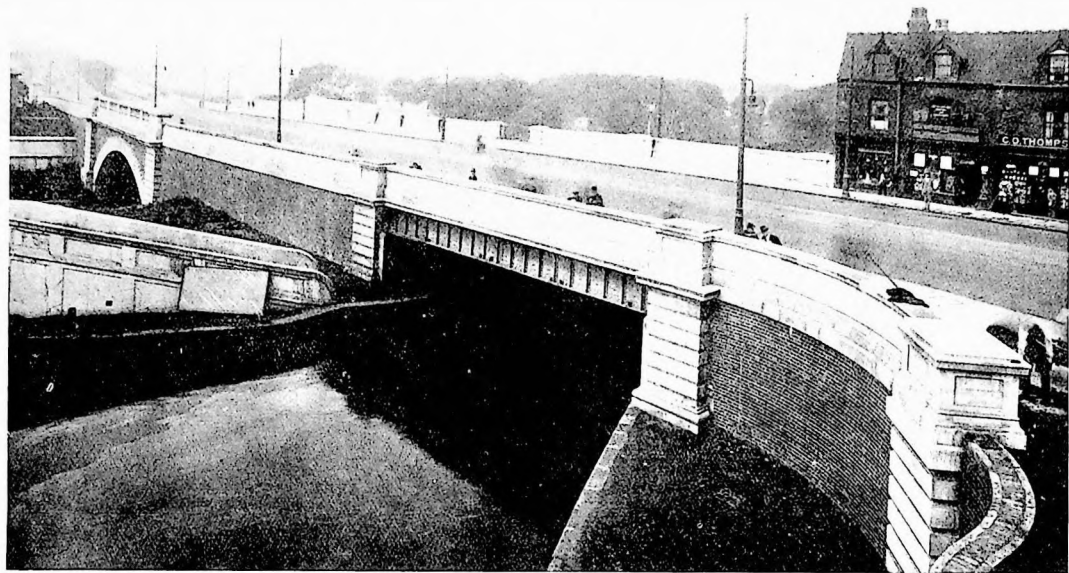
Chief of these is the new Salford Bridge at Gravelly Hill. The traffic census of 1925 proved this to be the busiest of nineteen selected points on the main roads—the width between the parapets at that time being only thirty-six feet! The new structure is eighty-five feet wide and consists of two bridges, one over the river and the other over the canal, united by wing walls supporting the approaches, and surmounted by a continuous parapet. The river bridge has a skew-brick arch having a span of seventy-two feet and a rise of fourteen feet, while the canal bridge is a deck-plate girder construction. Both are carried on mass concrete abutments. The carriageway, which is made of wood blocks on an eight-inch foundation of reinforced concrete, is fifty feet wide, and each footpath is seventeen feet six inches.

Other bridges constructed as unemployment relief works are railway bridges at Brighton Road (Balsall Heath), Bristol Road South (Longbridge), Bromford Lane (Erdington), Bridge Road (Saltley), and canal bridges at Stockfield Road (South Yardley) and Wheelwright Road (Erdington). River bridges include Colebank Road (Hall Green) and Hobmoor Road (Yardley) over the Cole, Pershore Road South (King's Norton) over the Rea, Harborne Lane (Selly Oak) over Bourn Brook, and Bromford Lane (Erdington) over the Tame.

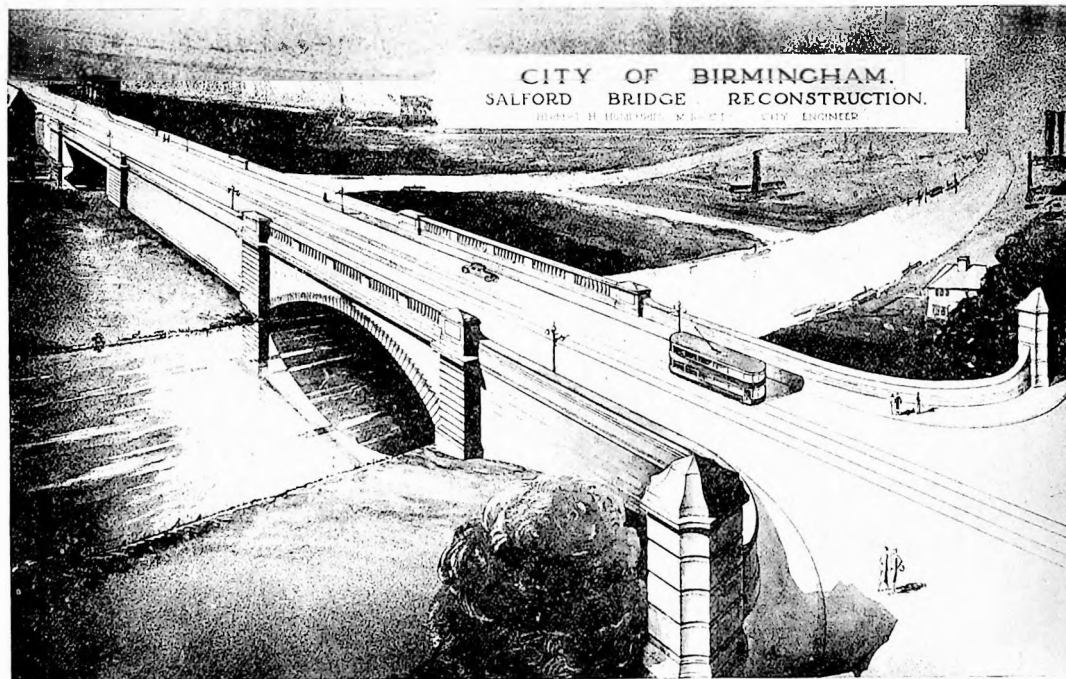
Lighting and Cleansing of Streets and Roads.

But for the invention of the incandescent mantle possibly electricity would have superseded gas as a street illuminant. Some streets are lighted by electricity, notably Broad Street in the neighbourhood of the War Memorial, and in Victoria Square there is a special installation of a high pressure gas lighting. Experiments have been made in the past and any new invention tested with a view to determining what kind of lamp and burner is best suited to local conditions, and it has been found that the medium-sized burner, known as No. 2, is the most effective, and this type of burner and mantle has been adopted throughout the City.

The lamps in the centre of the City and at many of the important points in the suburbs are the Public Works Department's own pattern circular lamp. It is questionable whether there is a lamp to equal it, many of them having been in use between thirty and forty years. The importance of the thoroughfare and the amount of traffic thereon determines the capacity of the lamps erected. Busy central streets are fitted with eight-light to sixteen-light burner lamps; main roads and tram routes four burners, with two additional red lights at "stopping places." Lighting and extinguishing is done by automatic clockwork apparatus.



SALFORD BRIDGE FROM GRAVELLY HILL.



VIEW OF NEW BRIDGE FROM LICHFIELD ROAD.

Although the Corporation have had statutory powers since 1883 to enforce the lighting of courts, the majority of owners failed to maintain and light lamps, and a few years ago it was decided to relieve the owners of all future liability if they would pay for the first cost of installation. This has resulted in a much-needed improvement, and over five thousand court lamps (fifty candle-power) are now maintained.

There are in use for street cleansing a large number of petrol-driven sweeping machines and machines by which the street surface is swept and refuse elevated and dropped into a receptacle on the machine ready for removal to tip, instead of being left in heaps to be transferred to carts by hand labour. There is also a steam-driven "vacuum" gully emptier, the contents of the gully being drawn by suction through a pipe into a container instead of being ladled out on to the side of the road and then shovelled into carts.

The principal streets are cleaned daily, the paved carriageways in the centre of the City being swilled down during the night time and all other streets cleaned periodically at longer intervals.

Main Drainage and Storm Water Troubles.

Birmingham drains through four main valleys—those of the River Rea, the Hockley Brook, the River Cole, and the River Tame. Except for three comparatively small areas the drainage is by gravitation; that is to say, the small sewers drain into the larger sewers, which in turn are connected to the main trunk sewers laid along the valleys and adjoining the streams into which they overflow in times of storm. The main valley sewers discharge ultimately into the Sewage Disposal Works at Saltley, Cole Hall, and Acock's Green.

One of the chief problems in connection with the drainage of the City in recent years, especially in times of storm, has been the rapid discharge of surface water flooding the sewers and streams owing to the increasing area of impermeable surfaces from streets, roofs, and yards as the City steadily developed.

In 1917 the City Council approved a scheme to deal with this by deepening Hockley Brook and re-constructing the Hockley main sewer with overflows, the former difficult and inevitably slow owing to necessity of underpinning so many buildings and maintaining the flow of the stream while the work was in progress, but it is now approaching completion. A length of sewer from Long Acre to Chester Street (over 1,900 yards) has been re-constructed, and where it passes through the Corporation Gas Works the ground was so bad that it was necessary to use steel sheet piling to line the trench sides, and to lay the sewer on piles. A further length in Farm Street and across Hockley Hill has also been re-constructed.

In the valley of the River Rea is the largest trunk sewer in the City, viz., the Rea Main Sewer, the enlargement of which has been proceeding for several years. The reconstruction was commenced near the County Cricket Ground off Edgbaston Road, and has proceeded as far as Lifford Lane, a further length up to Quarry Lane (Northfield) being now in hand. Ultimately the sewer will be extended up to Longbridge and the City boundary at Rubery, and serve to drain these areas for many years.

Magnitude of Sewerage Schemes.

Other main sewers which have had to be re-constructed are the Cole Valley eastern outfall sewer, a portion of which from near Coventry Road to near Cole Bank Road (Hall Green), is practically completed; and the

Erdington main sewer, which drains the Short Heath area. There are two electrically-equipped sewage pumping stations dealing with the sewage and storm water from areas which are too low to be drained by gravitation into main sewers—one at Argyle Street and the other at Witton.

The magnitude of the undertakings in recent years of this branch of public service, for which the Public Works Department is responsible, may be gathered from the following summary of the estimated cost of the various sewerage schemes, excluding all smaller schemes and small housing estates :

Hockley Valley Sewerage and Brook Improvement ...	£800,000
Rea Main Sewer Re-construction	£270,000
Cole Valley Eastern Outfall Sewer Re-construction ...	£140,000
Erdington Main Sewer	£100,000
Other Main Sewers	£685,000
Housing Estate Sewers	£258,000
Total	£2,253,000

Prevention of Pollution of Streams.

The pollution of streams and rivers, especially the Tame and Rea, is referred to in the chapter on sewage disposal. A systematic inspection of potential sources of pollution of streams within the City is carried out, and also in areas of adjoining local authorities above Birmingham. These authorities are at once notified of all pollutions detected, and six of them at the present time are contemplating the extension of their sewage disposal works.



HIGHFIELD ROAD, HALL GREEN.

There are adjoining the rivers a considerable number of trade premises where liquid waste is produced, and the number of cases is increasing where the permanent exclusion of this waste from the streams has been obtained by advising connection with the sewers. The Tame Basin Joint Committee commends this method to its constituent authorities as the most efficient for preventing pollution, and the Ministry of Agriculture and Fisheries reports that the example of the committee is one that ought to be followed all over the country.

Architectural Work and Building Bye-laws.

Some of the more important public buildings designed and erected within the past few years under the supervision of the City Surveyor are : Aston Fire Station, in the Renaissance style, regarded as one of the best in the country ; the meat market and extension of abattoirs, built on the land at the corner of Sherlock Street East and Cheapside ; Rubery Hill day-room extension, undertaken with a view to bringing the hospital more into line with modern requirements ; bungalow annexes at Hollymoor and Rubery, a new departure in mental hospital treatment designed on domestic lines ; re-construction at central and branch libraries ; and the extensive alterations and re-fitting for the new headquarters of the Municipal Bank in Edmund Street, as well as the new buildings and many re-constructions for numerous branches.

Several assistants are constantly engaged in the preparation of plans and supervision of this sphere of municipal activity. The administration of the bye-laws as to new buildings is also an important branch of the Department's work, the increasing use of concrete and reinforced concrete having introduced new factors involving very careful calculations as to strength, especially in regard to large buildings. Supervision is also exercised under the Factory Acts to ensure that means of escape are adequate in case of fire.

The chief work among public buildings during recent years has been supervising the alteration and re-decoration of the Town Hall.

Municipal Houses.

The first contracts for the erection of municipal houses under various Housing Acts were let under the Housing and Town Planning Committee, and in September, 1919, a Housing and Estates Department was formed. Housing work proceeded under this department until April, 1922, when the work was transferred to the Public Works and Town Planning Committee and their department has designed and supervised all subsequent erections. There was much variation in planning of the earlier contracts, but these were eventually standardized.

Under the 1919 (Addison) and also the 1923 (Chamberlain) and 1924 (Wheatley) schemes both parlour and non-parlour types of houses were built ; under the two later schemes, in addition, maisonnettes (two flats in one house) and flats were built. The totals of houses completed and under construction or sold will be found in the housing table in Chapter xiv.

Town Planning, Regional Planning, and the New Civic Centre.

Birmingham was first to take advantage of town planning legislation, the Town Planning Committee convening a conference of local property owners in anticipation of the passing of the 1909 Act. Since then six schemes have been prepared or are in course of preparation ; in fact, the whole

of the area of the City that it is permissible to "town plan" has been included in these six schemes. The areas involved are :

Quinton, Harborne, and Edgbaston Scheme	2,320	acres
East Birmingham Scheme	1,443	"
North Yardley and Stechford Scheme—City Portion, 2,065 acres ; portion in Meriden District, 1,111 acres	3,176	"
South Birmingham Scheme	8,267	"
South-West Birmingham Scheme... ..	9,863	"
North Birmingham Scheme	about 7,000	"
Total	32,069	"

The four first named have been approved by the Minister of Health. Each scheme has been related to the City as a whole, and regional planning over an area of 1,700 square miles under the administration of seventy-one local authorities, extending from Stafford in the north to Evesham in the south, and from Coventry on the east to Bewdley on the west, is aided by the Midland Joint Town Planning Advisory Council.

Modifications in Corporation regulations during recent years have affected the general style of residential streets, houses being no longer built right up to the street line with paved surfaces unrelieved by forecourts or grass. In streets which are not adopted highways the Public Works Department from time to time calls upon owners whose properties abut thereon to make up (sewer, pave, macadamize, light, etc.) such streets, and after completion they are taken over by the Corporation and declared highways repairable by the inhabitants at large and maintained out of the rates.

Extension of the City and the centralization of the administration previously carried out in the districts absorbed has made it essential to provide additional civic buildings centrally situated. Provision for future extensions of the Central Library and Natural History Museum and the need for widening the principal thoroughfares entering the City from the west has led the Corporation from time to time to acquire various properties in the vicinity of the present Municipal Buildings. Recently the laying out of the whole area within a circle having the War Memorial as its centre, and with a radius of about 300 yards, has been the subject of a competition for designs to provide for future civic requirements, combining the new civic centre with the existing one, and a premium of £1,000 paid for the design placed first by the assessor.

Vehicles and Plant.

The Department has in use for its multifarious activities a great number of vehicles of all descriptions, as well as large and important plant under the supervision of a highly-qualified engineer. Besides motor-cars and motor-cycles and a long list of road cleansing machinery and vehicles, there are twenty-five steam road rollers, eighteen steam wagons, six tractors and lorries, and a whole host of tar-spraying and road-making equipment. Carpenters, wheelwrights, and blacksmiths are employed at depôts in various parts of the City for repair work.



COAL TEST WORKS

Chapter VI.

GAS UNDERTAKING.

BIRMINGHAM to-day is considered one of the best-lighted cities in the United Kingdom. Gas lamps were erected in the early part of the nineteenth century by private individuals and companies, and the early prejudices against its introduction have long since been forgotten. The narrow streets and alleys of the town then were unlighted for the most part, and where any illumination was attempted it was done by evil-smelling link torches or oil lamps of a primitive character. These, like the laborious methods of winning sparks from flint and steel for the lighting of rushlights and candles, gradually gave way to gas.

Now there are something like 26,000 gas lamps in the thoroughfares of the City, and in the over-crowded parts where courts and terraces exist the City Council are exercising their statutory powers to ensure that these also are properly lighted.

Fifty Years' Ownership.

Birmingham has always been closely connected with the gas industry since its inception, and 1925 saw the fiftieth year of municipal ownership of the gas undertaking. It is the largest outside London, and plays no mean part in the lives and activities of the citizens of this metropolis of the Midlands.

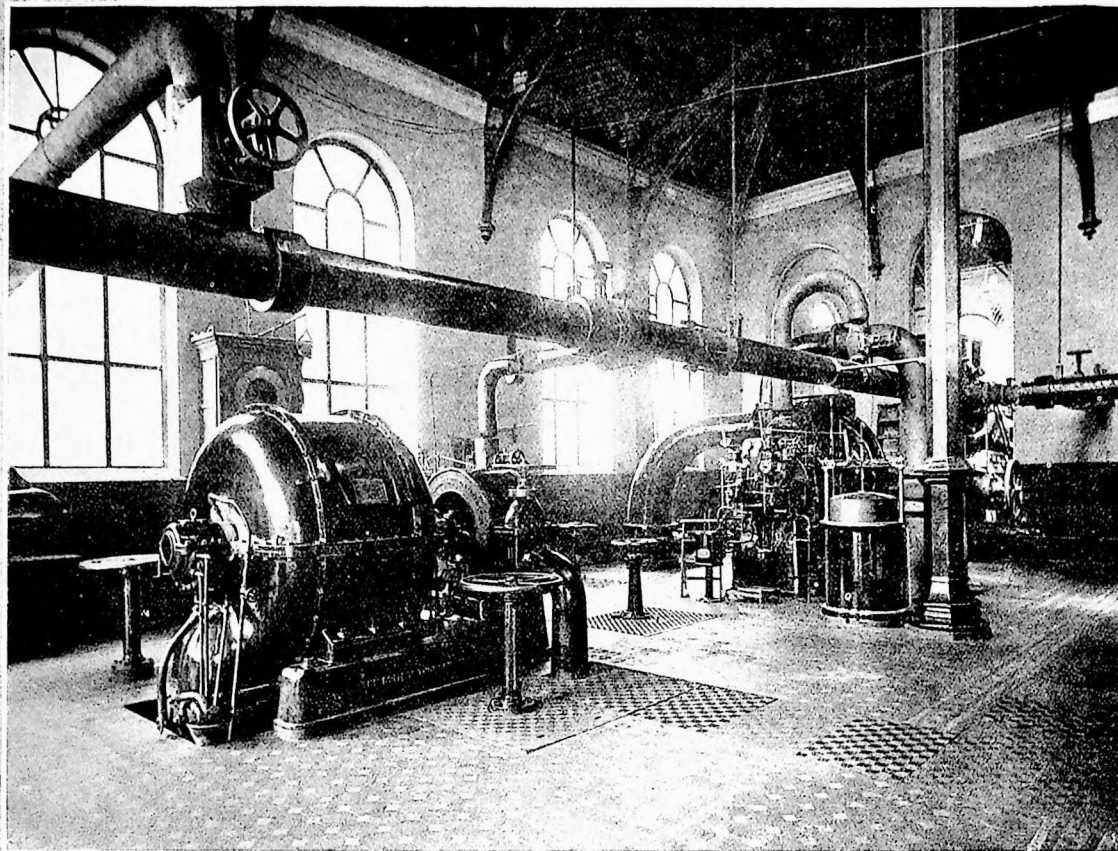
Works.

The Corporation has five gas works and a complete coal testing plant. The following table indicates their manufacturing storage capacity :

	Area Acres.	Daily Manufacturing Capacity (mill. cu. feet of gas).	Storage Capacity (mill. cu. feet of gas).
Windsor Street Works	26	23½	14½
Nechells Works and Coal Test Plant	24½	25	12
Saltley Works	18	12	5¼
Swan Village Works	22	6	3
Adderley Street Works	5½	2½	1
Washwood Heath Works	34	—	11½
Totals	130	69	47¼

It is anticipated that, owing to the increased demand, manufacturing plant will have to be installed at Washwood Heath in the course of a year or two. The two gasholders recently erected there are the largest twin gasholders in Europe, and each of the tanks has a water content of 10,000,000 gallons.

Important developments in the carbonization of coal have taken place during the last few years, and practically every well-known and tried system is in operation at the Birmingham gas works, and the plant is of the most up-to-date character. To manufacture the gas which was consumed in the twelve months ended March, 1927, the department carbonized 700,000 tons of coal. Frequently in the winter, during the heaviest periods of consumption, upwards of 20,000 tons of coal are carbonized per week. Little gas-coal is available locally, the most suitable for carbonization coming from South Yorkshire, Nottinghamshire, and Derbyshire. Transportation



GAS EXHAUSTERS, WINDSOR STREET WORKS

from these areas has a bearing on the price of gas, but Birmingham compares favourably in this respect with the prices prevailing throughout the country.

Department Constructs its Own Wagons.

Three thousand railway wagons are needed to convey the coal required at the works, and about 1,600 trucks are owned by the department. The control and working of these wagons is a business in itself, and in order to maintain them in good condition, and to get the utmost service from them, an up-to-date repair service depôt has been erected. All wagons owned by the undertaking are brought in periodically for overhaul, repairs, and painting; and during the past few years the department has constructed its own wagons and bought none from outside sources.

Water Gas and Residuals.

To meet sudden increases in the demand for gas—such as are caused by a sudden fall in temperature (which often means an increase in the output of several million cubic feet per day)—the making of carburetted water-gas is resorted to, and in this connection the Birmingham Gas Department purchases many millions of gallons of oil in the course of a year.

The residual products of gas manufacture have become indispensable to the carrying on of many other important industries. They are many and varied, but at the Birmingham gas works only a few of the known residuals are worked up, most of the crude tar and ammoniacal liquor being sold to contractors who work them up in the district. The production of crude tar is 10,000,000 gallons and ammoniacal liquor 28,000,000 gallons a year. The sales of coke are nearly 400,000 tons a year, and the sulphate of ammonia produced at Saltley and Swan Village Works is exported to many parts of the world.

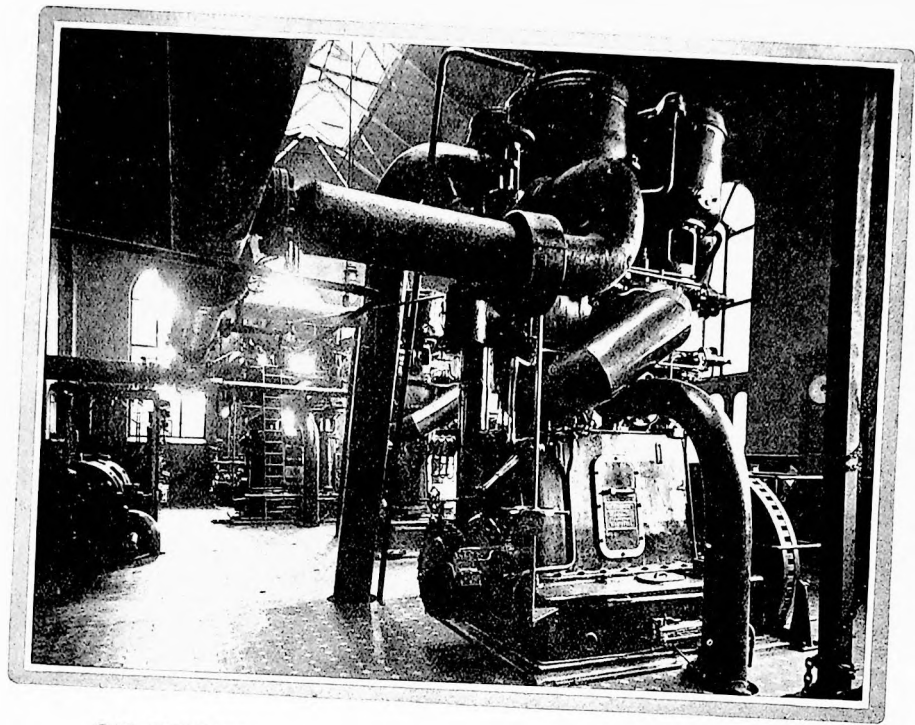
Supplying an Area of 125 Square Miles.

The department supplies gas over a very large area, including the districts of Wednesbury, Darlaston, and Sutton Coldfield, approximately 125 square miles, and throughout the district over 1,200 miles of mains of sizes varying from two inches to forty-eight inches are in existence. The mileage of mains is practically three times greater than it was when the undertaking was acquired in 1875.

The present output of gas is an indication of the department's enormous growth. In 1875 the total amount of gas produced by the two companies acquired was 1,800,000,000 cubic feet; the department now supplies this quantity in one winter month, and the following table gives the progressive increase in the output up to the present time:

Year.	Cubic feet.	Year.	Cubic feet.
1876	2,649,542,000	1910	7,545,150,000
1880	2,887,180,000	1915	10,365,908,000
1885	3,361,158,000	1920	12,013,340,000
1890	3,845,966,000	1925	13,358,368,000
1895	4,494,943,000	1926	14,051,666,000
1900	5,944,183,000	1927	13,928,756,000
1905	6,625,270,000		

The record daily output was created on December 20th, 1927, by well over 62,000,000 cubic feet being distributed, and during the week ended December 24th of the same year a record weekly output of more than 379,000,000 cubic feet was attained. The growth of the consumption of gas per mile of main has been abnormal. In 1875 this was 4,500,000 cubic feet; to-day it is 13,000,000 cubic feet.



GAS COMPRESSORS, PRESSURE SUPPLY, WINDSOR STREET WORKS.

Wages Bill of £500,000 a Year.

The capital value of the undertaking when it was taken over in 1875 was £2,000,931; to-day the amount outstanding is £2,698,381, although the Department is at least six times the size. The turnover is about £2,750,000 per annum, against £470,000 in 1876, and on this large sum the bad debts in the year ended March, 1927, amounted to only £715, or .025 per cent. In its fifty years' existence it has contributed £1,768,357 to relief of the rates, and the figures for the past few years will be found in the chapter on the City finances. They indicate the prosperity which has attended the undertaking since its formation. It now employs 4,000 people, with a wages bill of half a million pounds a year.

In 1875 there were 46,000 consumers, now increased to over 223,800, and 99,000 of these take supplies through ordinary meters, the remaining 124,800 through prepayment meters. The number of consumers has increased by 33,000 during the last five years.

The average consumption per prepayment meter amounts to 29,000 cubic feet per annum. Birmingham was one of the first to adopt them, the introduction being made in 1894 as a means of popularizing the use of gas in small houses. The pennies collected from these meters yearly amounts to over £500,000.

Cookers to the total of 210,000 have been installed, nearly 119,000 of these being in connection with prepayment supplies in artisans' dwellings, and 113,000 gas fires and hot-water apparatus. The department fixes annually upwards of 13,000 cookers of various kinds on sale outright, permanent hire, and hire-purchase terms, and in the same period about 16,000 gas fires are issued.

Much Abused but Trustworthy Meters.

More than 100 years have elapsed since the gas-meter was invented, and, although much abused, it is one of the most trustworthy mechanical appliances in use to-day. A special meter testing station has been installed in Birmingham, under the control of the City Justices, through which every new meter made in the district is passed. For the purpose of repairing, and to a certain extent making meters, the department has erected extensive shops at Windsor Street Works. In the course of twelve months many thousands of meters and stoves are passed through for cleaning and repairing.

The showrooms are some of the best equipped in the country. Besides the main showroom at the Council House, branch offices and showrooms have been built at Sutton Coldfield, King's Norton, Acock's Green, Erdington, Wednesbury, Harborne, and at Paradise Street.

The large amount of building work which has taken place during the last few years has rendered it advisable to create a special section which can assist architects and builders, and give them the fullest advice with regard to the fitting up of new houses with gas pipes and modern gas apparatus. It has been much appreciated and helpful in creating labour-saving homes in the district.

An 1808 Gas Plant for Soldering Toys.

One of the earliest instances of the use of gas for industrial purposes in Birmingham was in 1808, when a gas plant was erected for a toy manufacturer, who used it for soldering purposes.

The increase in the amount of town's gas used for industrial heating in the various manufacturing centres has, in some instances, been almost

phenomenal. Manufacturers are realizing the advantages to be gained by the use of gas as fuel in the place of solid fuel, and to-day in Birmingham it is used in thousands of processes and in most trades.

Industrial Heating.

Information and advice from the Gas Department is available to all manufacturers in the City. Many years ago the committee set up an Industrial Heating Section, which has developed in a remarkable way, and has now been merged with the Industrial Research Laboratories of the department. With the industrial showrooms and heat treatment foundry which have been set up, manufacturers have an opportunity of inspecting the latest types of gas furnaces, seeing actual tests under working conditions, and obtaining the fullest information with regard to the use of gas in their industry.

From the following table it will be seen that the quantity of gas used for industrial heating purposes during the last seventeen years has increased by approximately 2,200,000,000 cubic feet.

Year ending 31st March.	Total Gas Sold.	Total for Industrial Heating.	Industrial Heating per cent. of total.
1911	7,693,899,300	389,511,000	5.06
1912	8,089,641,000	482,854,200	5.97
1913	8,773,044,600	609,424,800	6.95
1914	9,551,783,300	793,840,400	8.31
1915	9,887,664,900	905,271,000	9.16
1916	10,796,405,600	1,496,742,100	13.86
1917	11,156,832,900	2,216,048,400	19.86
1918	12,006,496,700	2,680,489,200	22.33
1919	11,424,842,000	2,522,338,600	22.08
1920	11,329,113,800	1,910,643,600	16.86
1921	11,734,970,300	2,005,839,200	17.09
1922	10,264,218,300	1,345,637,300	13.11
1923	10,937,923,300	1,665,257,100	15.22
1924	12,017,086,400	2,057,283,000	17.12
1925	12,659,612,900	2,309,976,800	18.25
1926	13,389,831,100	2,643,998,600	19.74
1927	13,338,242,400	2,605,287,200	19.53

The output of gas under the heading "Total for Industrial Heating" does not include gas used for motive power, which, if included for the year ended March 31st, 1927, makes the percentage of gas used in manufacture twenty-seven per cent.

The foregoing table is eloquent testimony to the progressive nature of Birmingham's Gas Department—the City's oldest and most prosperous trading undertaking.

Chapter VII.

WATER SUPPLY.

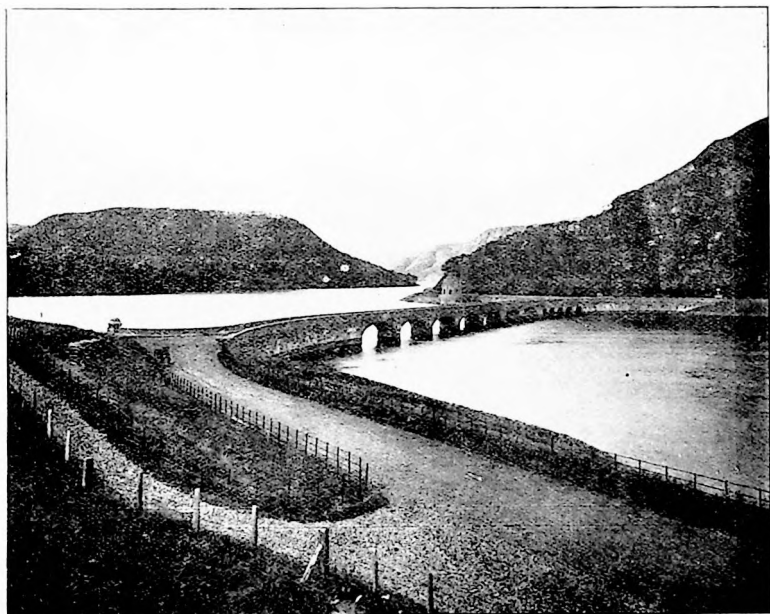
BIRMINGHAM has at her command an endless stream of sparkling water that has defeated the law of gravitation in many ways and travelled over seventy miles from Wild Wales to quench thirst and remove the grime and grease that a city's industry brings in its train. The novelty of the civic achievement has worn off, and citizens no longer hold a drinking glass where the light marks a faint straw-like colouring that mountain peat has introduced, nor remark the soap-saving softness of the washing water.

About seventy years ago Birmingham still relied upon mediæval sources for the greater part of her water supply. These sources were private and public wells, and the Waterworks Company, which was only able to serve one third of the population; two thirds of the town, therefore, obtained its water from the wells in the city or bought their supplies from water carts at a halfpenny a bucket.

Fifty, Sixty, Seventy Years Ago.

In 1849 the wells, almost without exception, were in a very unsatisfactory condition, and the water supply in the town was only comparable with that at Manchester, where, upon analysis, it was found that the whole of the ninety wells from which that town obtained its water "were more or less impregnated with impurities, some of them . . . most offensively so."

Attempts had been made as early as 1808 to provide the town with an organized supply of water, but it was not until 1826 that Parliament granted powers constituting "the Company of Proprietors of the Birmingham Waterworks for the purpose of providing a sufficient and constant supply of good and wholesome water for domestic, manufacturing, and other purposes." The area of supply was 2,215 acres, and the prescribed sources the River Tame and Hawthorn Brook. The latter was not used, however, and the powers of the company over it consequently lapsed. In 1831 the waters of the River Tame were turned into Aston Reservoir, and the first supply was pumped into a small storage reservoir in Edgbaston; the company commenced trading with forty-one customers, yielding a



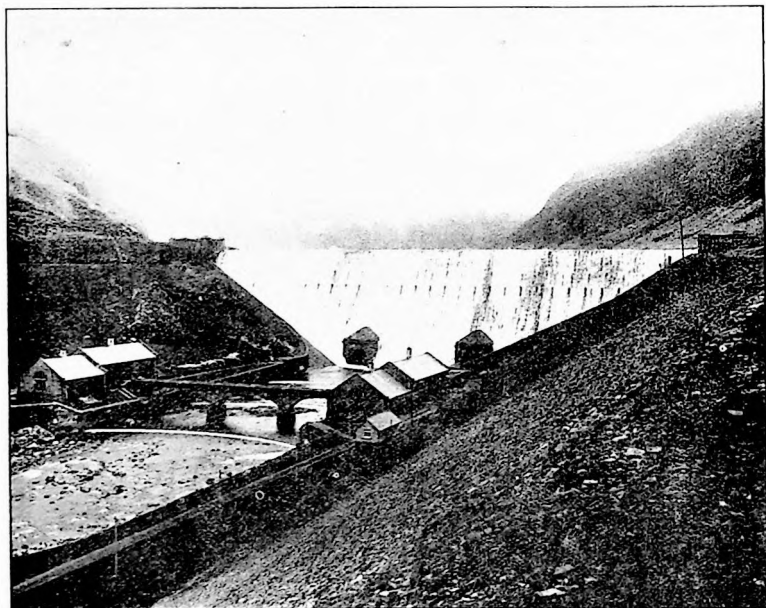
CAREG-DDU VIADUCT AND FOEL TOWER.

revenue of £133. A constant supply of water was provided throughout the company's area in 1853, and it is believed at that time Birmingham enjoyed the distinction of being the only town in the country with a constant supply of water: the town's motto is "Forward."

In 1854 and 1866 applications were made to Parliament for authority to increase the capital and extend the company's works and area of supply. The applications were granted, and another application in 1870 still further extended the area of supply and permitted the construction of additional works. The area of supply was now 54,209 acres, the area of the gathering grounds 190 square miles, and the estimated daily supply 17.3 million gallons.

Birmingham Buys the Old Waterworks Company.

In their Improvement Act of 1851 the Corporation were empowered to obtain by compulsory purchase all the works and interests of the company, and subsequently gave notice of their intention to purchase. The scheme was not carried through, however, and the powers consequently lapsed. It was not until 1875, during the mayoralty of Mr. Joseph Chamberlain, that renewed powers were secured under the Birmingham Corporation Act of that year, and on January 1st, 1876, the Waterworks undertaking passed into the possession of the town, the purchase being carried out, like that of the gas undertaking, by the creation of the perpetual annuities described in the chapter on the City finances. The total length of mains was then 266 miles.

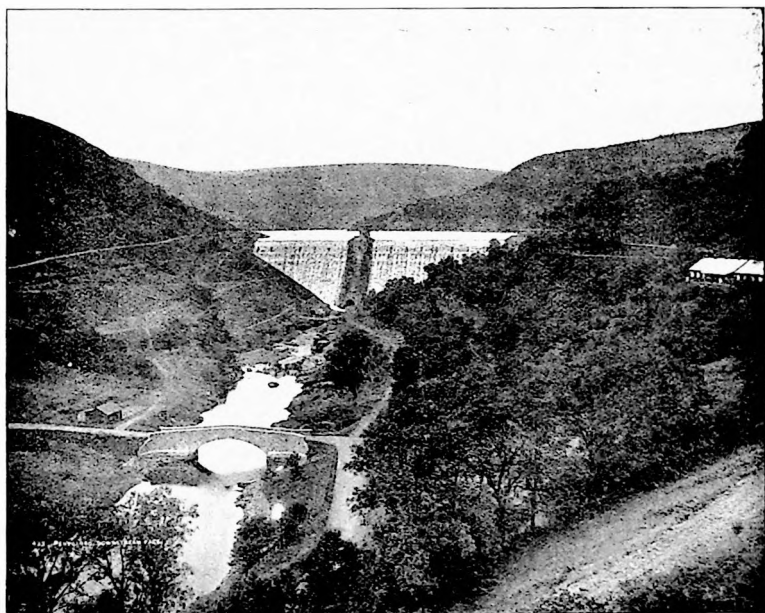


CABAN CÓCH DAM, WITH TURBINE AND COMPENSATION HOUSES.

The Corporation in 1879 obtained powers to raise further capital, and took steps to increase the daily supply to about 20,000,000 gallons and to provide storage therefor in fourteen reservoirs of a total capacity of 628.5 million gallons. By this time the area of supply had become largely extended, and towards the end of the nineteenth century it became manifest that the Corporation were reaching the end of their resources, and that some of the sources of supply were suspect. Provision for the future became urgent, not owing only to increasing population and area to be supplied, but also to the demand for improved sanitary conditions. After an exhaustive inquiry it was found impossible to obtain the needed supply from local sources, and it was decided to go to Wales for water.

Acquisition of Gathering Grounds in Wales.

After some opposition the City Council secured the Birmingham Corporation Water Act, 1892, which authorized the acquisition of gathering grounds of the upper portion of the River Elan and its tributary, the River Claerwen, covering an area of 45,562 acres, situate in the counties of Radnor, Brecknock, Cardigan, and Montgomery. The Act further authorized the construction of three reservoirs on the Elan and three on the Claerwen, together with an aqueduct for the conveyance of water to Birmingham, a receiving reservoir, filtration works, and pumping station at Frankley, trunk mains for the conveyance of water into the area of distribution, and other subsidiary works. In addition to providing a maximum quantity of 75,000,000 gallons per day for supply to Birmingham, 27,000,000 gallons



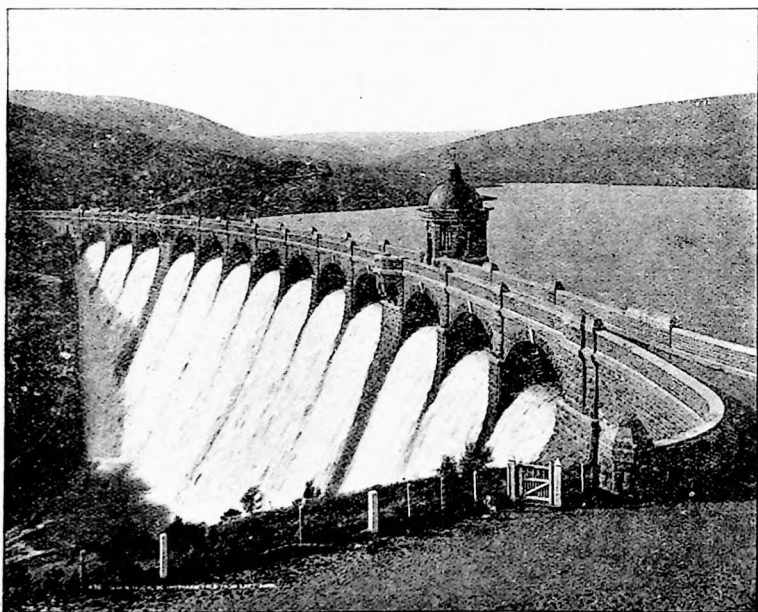
PEN-Y-GAREG DAM.

per day has to be sent down the River Elan as compensation to the River Wye. The compensation water is utilized to generate electricity, to light the model village, and the works in the Elan Valley.

The work of construction was commenced in 1893, and was sufficiently advanced in 1904 to enable a supply to be given to Birmingham, and the works were opened by H.M. King Edward VII in that year; it was not until 1906, however, that the works were actually completed.

The gathering ground of the Elan Valley Works consists of hilly country, composed of rocks of the Lower Silurian order, slates, grits, and conglomerates, and rising from 700 to about 2,000 feet above the sea. The long average rainfall over the whole area is 67.2 inches, and the daily yield of the rainfall about 135,000,000 gallons. For storage six impounding reservoirs, with a total capacity of 18,000,000,000 gallons, were originally projected, but only three on the River Elan have as yet been constructed.

After leaving the Caban Reservoir, the first of the three on the River Elan, and flowing through a tunnel about one and a quarter miles long, the water is passed through rough sand and gravity filters. After filtration, the water, which is soft and slightly acid, is treated with alkali to such a degree as will prevent any action upon lead pipes in the area of supply. In 1912 it became evident that steps must be taken to augment the capacity of the Elan aqueduct, powers were obtained to borrow money to effect this extension, and in 1914 it was decided to proceed with the laying of an additional line of pipes on the Elan aqueduct. The war intervened, however, and the task of increasing the capacity of the aqueduct is now proceeding by the laying of additional lengths of pipes as circumstances dictate.



CRAIG GOCH DAM AND RESERVOIR.

The Aqueduct, Reservoirs, and Distribution.

The total length of the aqueduct is seventy-three and a half miles, half of which consists of conduit and half of inverted siphon. The conduit lengths comprise about twelve miles of tunnels, and the remainder of "cut and cover." The conduits are all constructed to carry the full ultimate quantity of 75,000,000 gallons a day to Birmingham, and the whole are lined throughout with concrete, faced on the sides and invert with blue bricks. There are eleven siphons across the larger valleys, the largest being that across the Severn valley, which is seventeen and a half miles in length.

The water from the aqueduct flows through a recording gauge chamber into the Frankley Storage Reservoir of 200,000,000 gallons capacity—semi-circular in plan and thirty feet deep—then passed on to slow sand filters of a total area of fourteen acres. From the filters the water flows to one or other of two communicating covered pure water tanks, and from these the greater portion flows by gravitation to the distribution system in the district of supply. The receiving reservoir at Frankley not being of sufficient capacity to tide over any prolonged interruption in the Elan supply consequent upon serious breakdown in the aqueduct, an additional 500,000,000 gallon storage reservoir is being constructed at Bartley.

The Elan supply enters the district at its south-west boundary. One of the two gravitation mains from Frankley conveys the water direct to a 4,000,000 gallon covered service reservoir at Monument Road, and from there it is pumped to the Hagley Road covered service reservoir for distribution in a portion of the high-level zone. The other forty-three-inch main discharges direct into the middle-level zone distribution mains and through them into a covered service reservoir at Highter's Heath, and also communicates indirectly through a network of distribution mains with the Monument Road Reservoir. The forty-two-inch gravitation main from Frankley discharges into the low-level zone distribution system, the covered reservoir for which is at Erdington.

Newly-created Lakeland Vistas.

Too frequently it has become necessary to sacrifice the countryside upon the altar of the physical and industrial requirements of a great city, and it is pleasing, therefore, to reflect that the water undertaking preserves a great area among the Welsh mountains which scarcely differs from the rugged fastnesses depicted by Borrow in "Wild Wales."

In this great gathering ground of Birmingham's water supply there is a population of about a hundred scattered among hillside farmsteads, whose principal occupation is sheep-farming. Some years ago a census revealed that there were over 60,000 sheep upon the watershed, about a third of which number belonged to the Corporation, and were distributed among the tenants of the department and farmed in accordance with the agreements entered upon. The City owns much of the freehold and the whole of the surface rights of the land comprising the watershed, and the permanence of the lakeland vistas is thus assured.

Where possible and advantageous, afforestation has been carried out, and a nursery has been established in the Elan Valley for raising the young conifers for planting.

The waters of the Elan and Claerwen are well known to anglers as a resort for trout fishing, and arrangements are made for fishing in the reservoirs, streams, and natural lakes. The charges range from 2s. 6d. per day to £5 5s. a year, and tickets may be obtained at the Council House or at the local Estate Office in Rhayader. Boats are available on certain of the waters.

The completion of the Welsh water scheme marks one of the greatest achievements of Birmingham, and is a factor to which the present good health of the community is related.

Stand-by Sources of Supply.

With the advent of the Welsh supply many of the old sources were discarded, but the works at Whitacre, with water from the Rivers Bourne and Blythe and the deep wells at Aston, Short Heath, and Longbridge, are retained to supplement the supply when the demand in the water area exceeds the capacity of the Elan aqueduct.

Consumption of Water.

The growth of the undertaking is illustrated by the fact that in 1839 the daily average distribution was 3.40 million gallons. In 1876 (the date of acquisition by the Corporation) the consumption had increased to 8.30 million gallons, and by 1895 to 15.97 million gallons, with an estimated population supplied of 649,150. At March 31st, 1927, the average daily distribution was 26.038 million gallons, and the estimated population supplied 1,002,238.

Present Area of Supply.

The statutory area now covers 86,824 acres, or about 135.5 square miles, and comprises the following districts: City of Birmingham, Perry Barr, the parishes of Wythall, Cofton Hackett (part), Illey (part), Bickenhill, Castle Bromwich, Coleshill, Curdworth, Minworth, Sheldon, Water Orton, Elmdon, and Solihull.

Bulk Supplies.

Supplies of water in bulk are given as follow: Part of the Coventry Corporation water area, including the City of Coventry and district of Knowle, the villages of Shustoke and Over and Nether Whitacre in the Meriden Rural District, and the village of Fron in the Rhayader Rural District.

Mileage of Mains.

The length of trunk and leading mains in the district of supply is roundly 1,000 miles.

Capital.

The total capital authorized by the various Acts of Parliament (including the old works and the Elan supply) is £9,617,492.

Water Rate.

The basis of water rate levied in the area of supply is fifteen per cent. on the rateable value of the premises supplied.

Income.

The income of the department for the year ended March 31st, 1927, was £736,782.

Chapter VIII.

THE EDUCATION SERVICE.

OVER £1,800,000 is now being spent annually on education in Birmingham—rather more than half from the National Exchequer, the remainder from the rates. This, however, by no means represents the total expenditure of the citizens under this heading, for there are numerous institutions providing instruction which are self-supporting and make no call on public funds.

The Education Department has a staff of over 5,000, and those citizens anxious to discover exactly where the money goes will find ample material to satisfy their curiosity in the annual budgets of the Education Committee, or, in a somewhat less arid form, in the report on the work of the committee during the ten years 1914-24, which was published in 1925.

What is being done or attempted in the various branches into which, by tradition or for administrative convenience, the work of the Education Department is divided, is the purpose of this chapter to explain. But it must be remembered that nearly a generation will elapse before the full effect of what the schools are doing now can be properly appraised.

Nursery Schools and Elementary Education.

Although the School Attendance Branch, with a view to anticipating future demands for school accommodation, takes due notice of the arrival in the world of the citizen-to-be, official relations between him or her and the department are not usually established before the age of five. Most people agree that this is quite early enough under favourable conditions, but the experience of the School Medical Service leaves no doubt that while nearly all children are born healthy, a depressingly large proportion, through lack of proper care, unhygienic surroundings, or other causes inseparable from City life, have developed some kind of physical defect before they come to school.

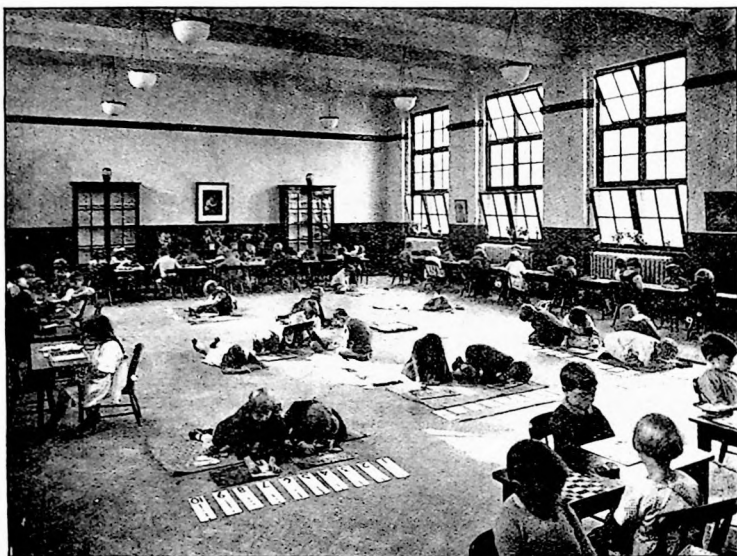
On physical grounds alone, therefore, much may be said for bringing children into contact with the Education Department at an even earlier age. But special schools for the under fives, usually called nursery schools, are expensive, and at present there are only two of them in Birmingham. Two years ago the experiment was begun of attaching a nursery class to an ordinary infants' school, and this may, perhaps, provide a practicable solution of the difficulty in the more congested areas.

At the end of the term during which the pupil becomes fourteen the legal obligation of parents to send a child to school ceases. More and more children are passing on each year from the elementary school to some form of further education. Yet the fact remains that six out of every seven Birmingham children are launched into the world at fourteen, and of these six at least four will in all probability never become members of any educational institution again.

The Critical School-leaving Age.

Whether society can afford to release so early and at so critical an age such a large proportion of its potential brain-power is a burning educational question.

Over fifty years of discussion have failed to secure any general agreement as to the nature and limits of the aims which the elementary school should set itself to achieve. Can it be expected to turn out children by the age of fourteen who are reasonably well equipped to meet the calls which will



Photograph—Ernest H. Fletcher, Mosley, Birmingham.

A MODERN ELEMENTARY SCHOOL: INFANTS' DEPARTMENT OF THE BILLESLEY COUNCIL SCHOOL.

be made upon them as individuals, as citizens, and as bread-winners or home-makers? Problems like these are exercising and will continue to exercise for years to come the minds of those who, in Birmingham and elsewhere, recognize that the future of civilization must depend largely on their successful solution.

Experience and experiment are doing something to clear the way. It has been realized, for instance, that the task before the elementary teacher, which is formidable enough under the most favourable circumstances, becomes impossible when classes are over-large and buildings ill-found, and many of the children in them handicapped by physical defects. So in Birmingham in recent years effort has been directed to reducing the size of classes and to bringing the older schools into line with modern standards of accommodation.

Progress has been made in both directions, yet a great deal remains to be done. The problem of buildings is a serious one. In some degree it is being eased by the fall in the birth-rate and by the gradual moving out of the population from the centre of the City to the new suburban housing areas. This drift to the outskirts explains why, in spite of the fact that the elementary school population is less than it was ten years ago, the committee has to face a substantial building programme in the next few years.

Physical Training, Organized Games, and Playing Fields.

A feature of elementary school life which has received increasing attention since the war is physical training. Far-reaching changes have resulted from a different conception of its aim, and little is seen now of the

somewhat formal, even mechanical, exercises based on the old military drill. The present day "syllabus" exercises require alertness of mind, quick decision, and instant response. Children enter into them with great zest, developing mentally as well as physically.

The last few years have witnessed also a great advance in the playing of organized games, for which every available space is brought into use. The most beneficial and the most enjoyed games are those taken on grass on the department's playing fields, or in the parks by arrangement with the Parks Committee. The department set out a few years ago to obtain fields for every part of the City, and they now have thirteen, averaging ten acres apiece. Ground has been obtainable only towards the outskirts of the City, and to make full use of the fields in school time the children are carried by tramcar, the majority by special cars run for the purpose. So great has been the demand made on the fields, and so obvious the benefits, that there is need to double the number.

School Medical Service and Parental Responsibility.

When established in 1908, the School Medical Service was concerned only with the routine medical inspection of children in elementary schools, but after three or four years' experience the belief that inspection should be followed by something more tangible in the way of treatment became a conviction.

A scheme was devised for the prescription and provision of spectacles for children with defective vision, for the surgical treatment of children with enlarged tonsils and adenoids, dental treatment, X-ray treatment, and a host of ill-defined minor ailments which had a serious effect upon the well-being of the children.



SCHOOL CLINIC, SHEEP STREET.

Within the last few years remedial exercises have been provided at two centres for children suffering from curvature of the spine, narrow chest, round shoulders, flat foot, wry neck, and similar deformities. During the last twelve months ultra-violet ray treatment has been available for children exhibiting certain forms of general debility with anamia, for those with late rickets, various skin complaints, and chronic nasal discharges.

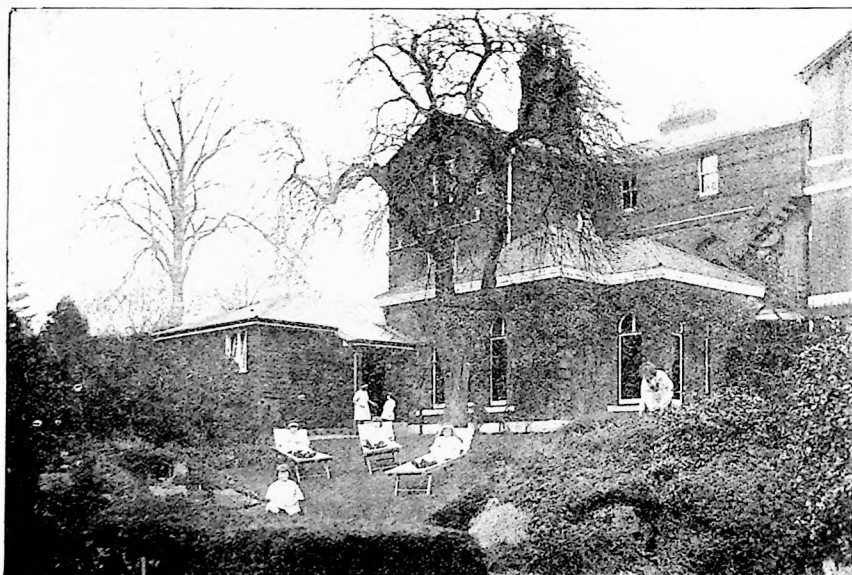
The contention that the provision of a highly-organized system of medical treatment associated with the public elementary schools tends to undermine parental responsibility has been anticipated and met by the decision to make a charge for all forms of treatment (except minor ailments and X-ray treatment for ringworm), and, so that such charge shall not deprive any child of its right to treatment, the fee is remitted or reduced in necessitous cases. Provision is also made for the medical inspection of pupils in the secondary schools and other institutions for higher education.

The work of the School Medical Service is also concerned with the raising of the standard of personal cleanliness in the schools. How successful this has been may be gauged from the fact that whereas in 1914 only 33.4 per cent. of the children were certified as clean, this figure had risen in 1926 to 78.92 per cent.

Provision for Blind, Deaf, and Physically Defective.

There are a number of children who, through some handicap, mental or physical, do not fit easily into the elementary schools scheme. For these special arrangements have to be made.

Blind children are placed for their education at the Edgbaston Institution for the Blind, or, prior to the age of nine years, at the Branch



BASKERVILLE, HARBORNE.

Institution at Harborne, although a few children are sent to other institutions in various parts of the country. Partially blind children—i.e., children who, while possessing a fair measure of sight, are yet unsuited for education in the ordinary elementary schools—are provided for by means of special classes held at the Edgbaston Institution and at Whitehead Road, Aston, the former serving the southern half of the City and the latter the northern.

Deaf children are accommodated either at the Gem Street or Moseley Road Day Schools, except that in special circumstances a few children are sent to the Edgbaston or some other institution for the deaf.

For crippled children two day schools at George Street West and Little Green Lane are provided, the pupils being conveyed between their homes and the schools by Corporation omnibuses. A number of scholars suffering from heart affections also attend these schools.

There is a residential school for physically-defective children at Baskerville House, Harborne. It accommodates boys and girls, and was first intended for those crippled children who could not attend either of the day schools mentioned above, but it is now mainly occupied by children suffering from rheumatic affections of the heart. Owing to earlier advantage of remedial agencies being taken, the number of children over the age of seven years crippled with orthopaedic defects has diminished.

Open-air Schools for Weakly Children and Special Schools.

For weakly, debilitated, and anæmic children two open-air schools are maintained—a Day School (Uffculme) at Moseley accommodating 120 children, and a Residential School (Cropwood) at Blackwell with accommodation for eighty children—both gifts to the Corporation from Mr. and



CROPWOOD RESIDENTIAL OPEN-AIR SCHOOL, BLACKWELL, BIRMINGHAM.

Mrs. Barrow Cadbury. They are far from meeting the needs of the whole of the weakly children, especially as attendance at the Uffculme School has necessarily to be restricted to those resident in Central or South Birmingham. Moreover, the Cropwood School can only accommodate children of one sex at a time, its use being reserved for boys and girls alternately at intervals of two years. Consequently a site has been acquired on the north side of the City for a day open-air school to meet the requirements of that part of the town.

Before the passing of the Elementary Education (Defective and Epileptic Children) Act, 1899, authorizing the establishment of special schools or classes, such classes had already been formed in Birmingham, the first being opened in 1894. There are now eight day schools for the mentally-defective, with room for 1,038 children, but the demand for accommodation is heavy, and two additional schools—one in the north-west and one in the south-east district—are needed.

About 100 mentally-defective or epileptic children are maintained at the Monyhull Residential Special School—established under an agreement between the Board of Guardians and the Education Authority in 1913. The Guardians also maintain there educable mentally-defective children for whom they are responsible, and any spare places not required from time to time are let to other authorities.

Facilities for Higher Education.

When a scholar in an elementary school reaches the age of eleven the time has come for two decisions to be taken.

First, whether he (or she as the case may be) has the ability which will enable him with benefit to himself and the community to take a course at a secondary school; second, whether his parents can afford the additional expenditure and loss of earnings which such a course would involve. In the former case no doubt the decisive voice will lie with his present teacher. In the latter a great deal will depend in many cases on what the Education Committee is able to offer in the way of financial assistance. If the brains are there, and there is a reasonable prospect of the necessary funds being forthcoming, then he will probably sit for the general admission examination to secondary schools, which is held about Easter in each year.

A Comprehensive Sifting Process.

The arrangements made for conducting this admission examination and the scheme for awarding maintenance allowances, free places, and remission of fees to the successful candidates are as comprehensive as any that exist in the country to-day. The main features of this sifting process are briefly told.

Prior to the examination a complete survey is made of the potential brain power of the City to see that clever children do not miss their chance through the ignorance or apathy of their parents. Then comes the examination itself, which covers all the secondary schools. So far as the total secondary school accommodation allows, the examination arrangements, by giving each candidate a choice of three schools, provide against the possibility of a child of ability missing his chance of a secondary education altogether because the particular school at which he applied happened to be one where the competition for entry was keener than elsewhere.

Finally, the scheme offers financial assistance graded to meet the circumstances of the parents and the increasing cost for the pupil as he gets older or mounts to some higher rung of the educational ladder, such as a university.

Secondary School Accommodation.

Neither in Birmingham, nor probably in any other part of the country, are there sufficient secondary school places for all the children who could occupy them with profit. There must at present be competition for entry, and in the interests of the community, as well as in fairness to the individual, this competition is carried out in a way that is likely to pick out the best candidates.

A survey carried out after the war showed that Birmingham possessed only 6.6 places per 1,000 of its population, compared with 11.8 places in other large provincial cities. In view of this the Education Committee were authorized to undertake a substantial programme of developments.

In addition to the school for girls at Erdington which was opened in 1918, a school for 500 boys has been provided at Moseley, and a new school for 500 girls has just been opened at King's Norton. A further mixed school for 500 pupils is nearly completed at Saltley, and it is anticipated that by 1930 the number of places per 1,000 of the population will have risen to 8.4.

This increase in the provision of accommodation has been accompanied by progress in the schools themselves. The average school life and the average leaving age have risen appreciably, the amount of advanced work has considerably increased, and there is a steadily growing flow of pupils to the universities. To make possible that variety in the instruction provided which is essential if the secondary school pupil when he leaves is to meet the varying demands which the world will make upon him, it has been decided to increase the size of secondary schools wherever possible to the normal accommodation of 500 pupils.



Photograph—Ernest H. Fletcher, Moseley, Birmingham.

MOSELEY SECONDARY SCHOOL FOR BOYS.

Junior Technical and Commercial Schools.

As the age range for admission to secondary schools is eleven to thirteen, candidates in the ordinary course will have two chances. It must not, however, be thought that if a child fails to secure admission before reaching thirteen his prospects of any kind of full-time further education are finished. There are two Junior Schools of Art, a Junior Technical School, and a Junior Commercial School. These provide what is in many ways comparable with a secondary school training, in addition to special attention given to studies of a vocational nature. The course is for two or three years, and pupils are normally admitted between the ages of thirteen and fourteen—i.e., in the last year of their elementary school life.

In spite of what has been done, the elementary school remains the finishing school for six out of every seven boys and girls. This large remainder contains an immense variety of material, and to find a curriculum which in the time available will do anything like justice to their needs as individuals, as citizens, and as bread-winners or home-makers is the great quest on which educationists are constantly engaged. Many think the quest will never be ended while the leaving age remains as low as fourteen.

Senior Elementary Schools Proposal.

A conviction born of practical experience is that, if the older children remaining in elementary schools are to have the training for which their individual needs and aptitudes call, they must be collected together in schools of such size and with such equipment and staff as may make the necessary variety of curriculum economically as well as educationally practicable. This is now being done on a small scale, and it is proposed as opportunity offers to organize senior elementary schools for those children between eleven and fourteen who do not proceed to secondary and similar schools.

The senior school for children from eleven to fourteen, if it is for about 400 children, will comprise about nine classes—i.e., three for each age group. This will allow of the children being carefully selected and for different aptitudes to be catered for by varying curricula.

Whatever these schools may accomplish, it is generally recognized that they can only touch the fringe of the adolescent problem. An important departmental committee has recommended the raising of the school age to fifteen as a first step towards its solution, and others who have had practical experience in day continuation schools see in them the solution which is most likely to prove feasible in large industrial areas.

Continued Education.

When boys and girls start work they may continue their education at the Evening Institutes which are scattered all over the City.

Over 12,000 students a year find them worth attending, and for a considerable number of them they provide a path *via* the Senior Technical and Commercial Colleges to the higher ranks of industry and the professions.

There are signs that employers of juvenile labour, who recognize the advantage and the duty of providing educational facilities for their young employees, are in favour of releasing them for part-time education in the day-time. The Day Continuation Schools at Bournville, which were originally supported almost entirely by two large firms in the district, now contain employees from several other firms and Corporation departments, while similar classes have recently been started in the centre of the City in response to requests from industry for this form of training.

Technical and Commercial Colleges and Schools of Art.

Adequate provision for instruction in technical, commercial, and art subjects in a large industrial centre like Birmingham is important. The City possesses three Technical Colleges, three Schools of Art with a number of branch schools, and a Commercial College, which, at the moment, has no permanent home of its own and is housed at the University in Edmund Street.

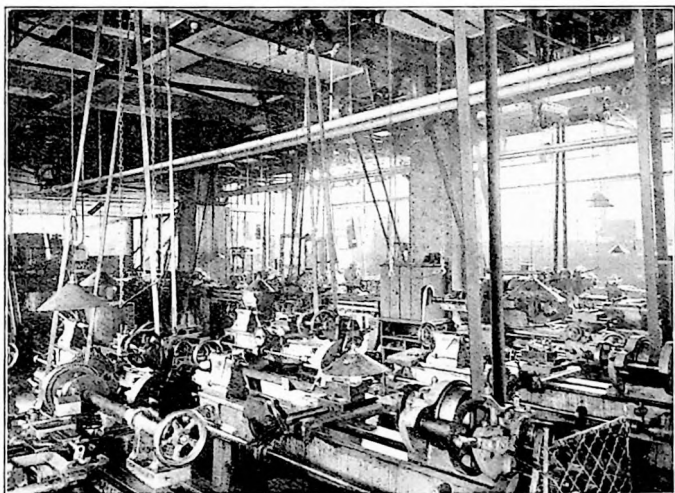
Instruction in technical and commercial subjects at a less advanced stage also forms a large part of the work in the Evening Institutes. It is generally admitted that the facilities at present available do not suffice to meet the demands of local industry and commerce, and the City Council has decided that the provision of additional accommodation for the Technical College and of a permanent building for the Commercial College can no longer be deferred.

Apart from the Jewellers' School, which has suffered somewhat from the depression in industry, the same steady growth in the demand for their services has been experienced by the Schools of Art.

School-leaving Conferences on Future Employment.

The interest of the Education Department in the children does not cease when the full-time day school is left behind. It is desired that the pupils shall make the best use in industry and commerce of the training they have undergone. Therefore an organization was set up as far back as 1911 with the object of giving after-care where necessary, and ensuring as far as possible that boys and girls entered the employment for which they were best fitted; also that employers obtained the young employees who were most likely to make good in their particular kind of work.

The children are first brought in contact with this organization, conducted by the Juvenile Employment and Welfare Department, shortly



FITTING SHOP AT THE CENTRAL TECHNICAL COLLEGE,
SUFFOLK STREET.

before they leave school. Officers attend choice of employment conferences at all schools each term, at which the parents of children about to leave are invited to be present. At these conferences questions affecting the children's welfare are discussed, and such matters as continued education and future employment receive special attention. Not only is advice as to suitable employment offered, but efforts are made to find suitable openings. Nearly fifty Group Care Committees, comprising 1,200 voluntary helpers, exist, with which all the elementary schools are associated.

In addition to dealing with children when they leave school, the department continues to render assistance to young people until they are eighteen, and is also responsible for the administration of Unemployment Insurance Acts for persons between sixteen and eighteen years of age. The social requirements of adolescents are watched with a sympathetic interest, and considerable assistance is rendered to organizations by granting the free use of school accommodation. Co-operation exists with the Public Libraries Committee, and arrangements have been made whereby the Education Department is responsible for books loaned to young people, as explained in the chapter on the public libraries.

During a year over 94,000 visits to the department are made by young people requiring advice or assistance, and situations are found for about 7,000 each year. To ensure success it is necessary to keep in close touch with schools, social organizations, and employers, and it is essential that the officers should have a practical knowledge of industrial conditions.

The activities of the Juvenile Employment and Welfare Department are not entirely confined to children over school age. Evening Play Centres are organized for school children, organized games are promoted in playgrounds and recreation grounds during the summer evenings, and camp schools are also arranged.

Chapter IX.

MENTAL HOSPITALS.

PATIENTS in Birmingham's mental hospitals are in the care of an Asylums Committee, who are elected from members of the City Council, and who administer the three divisions of the City Mental Hospital at Winson Green, Rubery, and Hollymoor by means of two sub-committees.

Provision was first made for the treatment and maintenance of lunatics in 1845. In November of that year a committee was appointed by the Council to consider the best means of carrying out the powers of the Act of the 8th and 9th Victoria, Cap. 126 (1845), entitled "An Act to Amend the Laws for the Regulation and Provision of Lunatic Asylums for Counties and Boroughs, and for the Maintenance and Care of Pauper Lunatics in England."

On the report of this committee it was determined to provide an asylum for the 199 lunatic paupers of the three parishes constituting the borough, the numbers being: Birmingham, 166; Edgbaston, 6; and Aston, 27. As the population of the borough in 1845 was 201,789 the pauper lunatics were returned at about one in a thousand. In 1880 the population was 396,446, and the lunatics either in the asylum or provided for elsewhere numbered 828, more than two per thousand.

Land Bought at Winson Green and Rubery Hill.

In 1847 twenty acres of land at Winson Green were bought and an asylum, with lodges, farm buildings, and wharf, was built during the

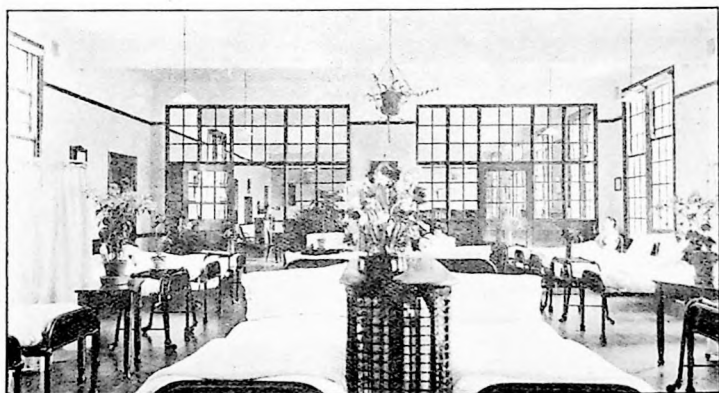


THE ENTRANCE BLOCK, HOLLYMOOR.

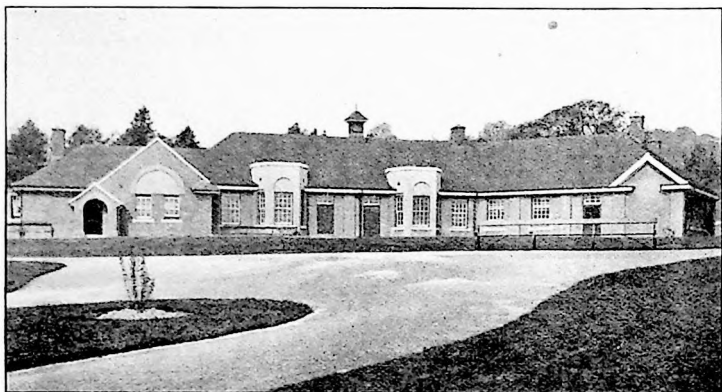
ensuing three years. The institution provided accommodation for 300 patients. Additions have been made from time to time, and Winson Green now has accommodation for 624 patients.

In 1876 a site at Rubery Hill, Northfield, of 151 acres was purchased and buildings erected there which provided accommodation for about 625 patients. Extensions have since taken place, bringing the official accommodation up to 817.

In 1900 121 acres of land were acquired at Hollymoor Farm, adjoining the Rubery Hill estate, and a building erected for 604 patients. This was called the Hollymoor Annexe of Rubery Hill, and, with the building at the latter site, forms a conjoined hospital under one administration.



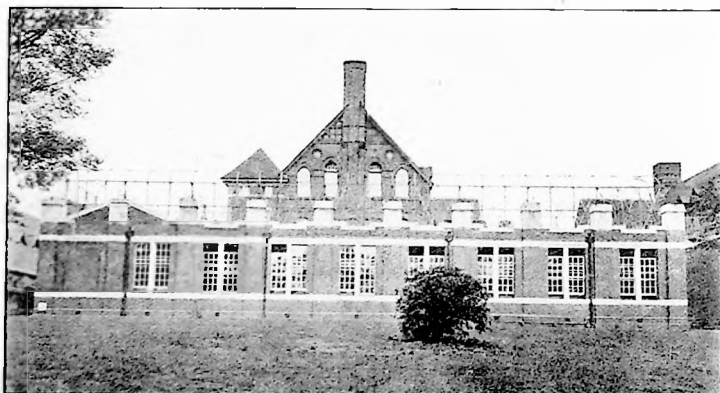
FEMALE RECEPTION WARD, RUBERY.



BUNGALOW ANNEXES, HOLLYMOOR AND RUBERY.

Extensions at Hollymoor and Rubery.

Since the war an additional twenty-seven acres have been purchased adjoining the Hollymoor Estate, and under an unemployment relief scheme the following buildings erected for the Rubery Hill and Hollymoor Hospital: Three bungalows (each for forty patients), four day rooms, and a house for a married medical officer. A special treatment block—comprising operation, anæsthetic, sterilizing, hydrotherapy, electrical treatment, and surgeon's and clinical rooms—was added in 1926, and many other improvements, such as the provision of enlarged ward gardens and a road uniting the two estates of Hollymoor and Rubery Hill, have been effected under a similar scheme. Hollymoor has long stretches of pleasant walks for patients covering nearly four miles.



DAY ROOM EXTENSION, RUBERY, SHOWING FLAT ROOF FOR OPEN-AIR TREATMENT.

The enlargement of the City in 1911 made fresh demands on the City's asylum accommodation. In 1914, besides the accommodation for 2,145 patients provided by the Asylums Committee at Winson Green, Rubery Hill, and Hollymoor, contracts had been made with the authorities of seven outside asylums for the care of 540 patients. By January 1st, 1927, provision had been made at Winson Green for 755, Rubery Hill 857, and Hollymoor 644, and only 321 patients were in external asylums. The cost of providing these institutions respectively was £152, £194, and £415 per bed.

During the war Rubery Hill and Hollymoor were loaned to the War Office and converted into military hospitals, and the patients formerly housed therein were, by arrangements made by the Board of Control, accommodated elsewhere.

Until 1922 the Winson Green Mental Hospital had been the principal reception hospital, and the other institutions had functioned as homes for chronic and protracted cases. During the year 1922 a scheme came into operation whereby fresh cases were admitted directly to Rubery Hill and Hollymoor from the southern two-thirds of the City, thus giving each institution a proportion of new work and lightening the load of direct reception cases on the original hospital.

Research Work : Legal and Economic Handicaps.

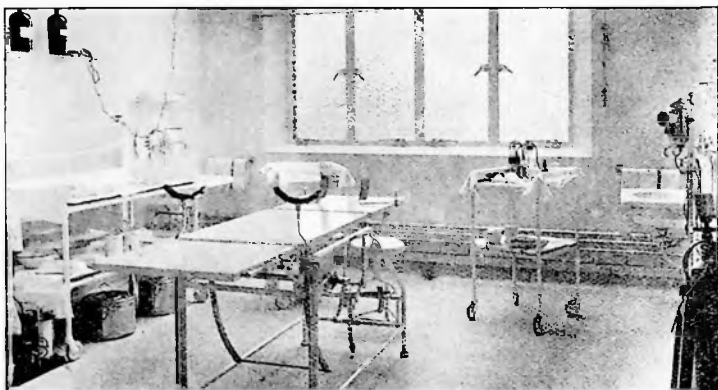
It is recognized that mental disorder is the expression of a profound bodily disturbance, the exact limits of which are difficult to define at present, and more research work needs to be directed to it both for humanitarian and economic reasons, but this branch of medical activity has had prejudice and ignorance to overcome, as well as legal and economic handicaps.

In 1922 the Asylums Committee co-operated with the University of Birmingham to set up a Joint Board of Research as to Mental Disorder, under the chairmanship of Sir Gilbert Barling, and established and equipped a large research laboratory at Hollymoor, with the late Sir Frederick W. Mott as honorary director, to investigate problems associated with mental disorder along such lines as were thought fit. It was hoped that other local authorities would join in the scheme, but legal obstacles at present act as a bar to that development. The Birmingham Board of Guardians has, nevertheless, associated their Monymay Colony with the scheme.

Visiting Specialists.

In addition, the committee has appointed visiting specialists in different branches of surgery, etc., to visit regularly their hospitals, to consult with the resident medical staff on bodily disease processes found in the patients, and to treat such as they are able in an intensive manner. An up-to-date X-ray plant has been installed and found a valuable aid to diagnosis of hidden conditions. The result of a practical examination of the bodies of newly-admitted mental patients reveals a multitude of physical abnormalities and disturbances often of a protracted and intractable character, and the treatment of these conditions, where possible, should result in a general improvement of the patient.

It is hoped that as a result of treatment along these special lines, the discharge rate will be augmented, the annual increment of patients lessened, the physical as well as the mental capacity of the patient on discharge enhanced, and the re-admission rate and the duration of stay in hospital reduced. The results of the past year's activities at Rubery Hill and Hollymoor Hospital give ground for encouragement.

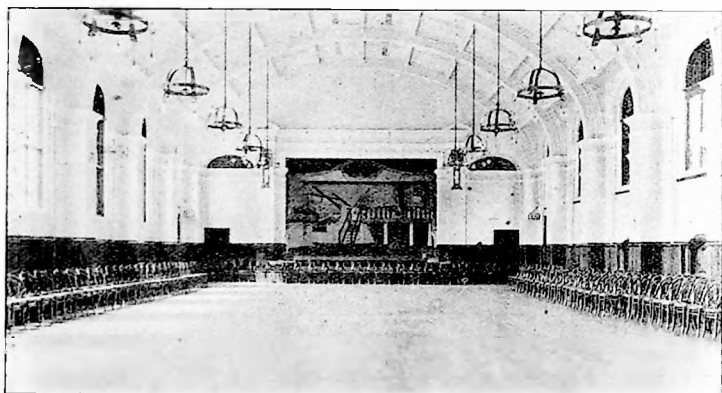


THE OPERATING THEATRE, SPECIAL TREATMENT BLOCK, RUBERY.

Upkeep and Hospital Personnel.

The maintenance and repair costs are kept separately. The former is the cost of the maintenance of patients and a charge on the Guardians, while the latter is the cost of upkeep of buildings, etc., and is a charge on the City Fund and Rate Account. In 1878 the actual weekly cost of maintenance was 8s. 6d.; in 1882, 9s. 4½d.; in 1910, 11s. 1½d.; in 1914, 11s. 2d.; in 1924 the actual weekly charge made was 26s. 3d., and in 1927 26s. 10d.

At the head of each hospital is a medical superintendent who combines the duties of chief executive officer and chief physician and co-ordinates the work of different sections of the hospital personnel. This includes medical staff (visiting and resident), male and female nurses, as well as farm and garden, engineering and works, clerical and stores, and domestic employees. They constitute, under the Birmingham Asylums Committee, a band of workers always aiming at the restoration of the mentally afflicted to the normal walks of life.



THE RECREATION HALL, HOLLYMOOR.

Chapter X.

CITY MARKETS.

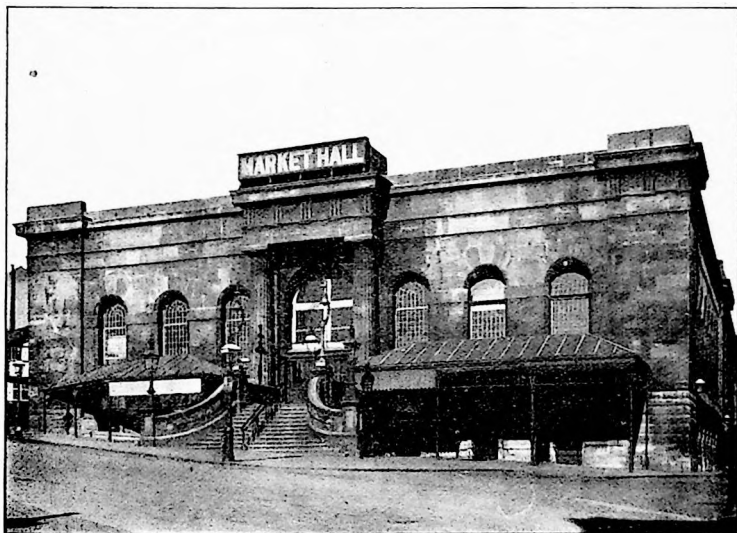
A CHARTER of Marketing Rights was granted to one Peter Fitzwilliam, the Sewer of Dudesley, by Henry II in the year 1166, so that, although Birmingham's importance as a City is of comparatively recent date, it has been a marketing town for the last 760 years. Many charters have been granted since then, and many claims have been contested by the heirs of the Sewer of Dudesley for the possession of these important rights.

A change in the control of the Marketing Rights took place in 1806, when the Town Governors, or, as they were then called, "The Commissioners of the Birmingham Street Act," contracted for the market tolls. Later (in 1824) the Commissioners purchased outright from the then Lord of the Manor, Mr. Christopher Musgrave, the marketing rights and tolls for the sum of £12,500, and these they controlled until 1851, when, by the Birmingham Improvement Act, the marketing rights and all the powers appertaining to them, together with rights of the borough, were transferred to the Town Council, in whom they are now vested. They have been greatly extended and improved from time to time, and owing to their close proximity to a number of small towns, serve as a distributing centre for a large and increasing community.

Wholesale and Retail Markets.

The Birmingham markets rank amongst the first in the country, and are six in number :

MARKET HALL.—This handsome and spacious building of Bath stone, situated in the Bull Ring, was opened in 1855, and has an area of 4,314



THE MARKET HALL.

square yards. The hall is divided into four main avenues, being connected up by smaller avenues at right angles. The whole of one of the side main avenues is occupied by retail fishmongers and the centre avenue is confined to florists, seedsmen, and fruiterers. The remaining two avenues are let to tenants whose business is of a somewhat varied character, and in these avenues can be purchased toys, domestic livestock, music, and fancy goods of all kinds. There is also a farmers' butter market held each Thursday in one of the side avenues, but the attendance of sellers is now very small, and the business done almost negligible.

WHOLESALE FISH MARKET.—The wholesale fish trade is confined to this market at the corner of Bell Street, facing the Bull Ring. Prior to its erection in 1869 the salesmen conducted their business in the open in Dale End, with poor facilities and lack of proper accommodation. Owing to increasing trade the Town Council, in 1878 and 1882, purchased adjoining properties, and some years later carried out considerable extensions, and the total area is now 1,894 square yards. There are cold stores in the basement, with a freezing capacity of 37,048 cubic feet, and an ice-making plant with a capacity of thirty-five tons a day, both let on lease.

CATTLE AND PIG MARKET.—This occupies an area of 8,461 square yards, is situated in Montague Street, and is close to the railway sidings. It is a well-equipped building, affording ample facilities for the sale of livestock, but for some years past the business in this market has steadily decreased, and since 1919 no animals except pigs have been exposed for sale.

WHOLESALE FRUIT AND VEGETABLE MARKET.—At one time this section of marketing was held in the open, opposite the Market Hall, in Worcester Street, Spiceal Street, and in the vaults under the Market Hall. With the



WHOLESALE VEGETABLE MARKET.

growth of the town and the need for better conditions it was decided to erect a covered market, and the Smithfield Wholesale Fruit and Vegetable Market was the result. This was opened in 1883, and in 1892 and 1903 was considerably extended. Smithfield Market has an area of approximately 14,560 square yards, all under cover. The building as a market compares well with the largest in the country. The business of the market is divided into two sections, one being set aside for wholesale merchants, whilst the other is for market gardeners who bring in their own produce for sale. In this latter section the "Rag Fair" is held on Tuesdays and Saturdays, and is a popular marketing feature.

ST. MARTIN'S MARKETS.—Opposite the Smithfield Fruit and Vegetable Market in Jamaica Row is the old St. Martin's Market, having an area of about 560 square yards. It was erected about 1851 to be used as a wholesale meat market, and was used for this purpose until 1897, when the wholesale trade was transferred to the new City Meat Market. A portion of the premises still serves as a small retail market, which is held on Saturdays.

CITY MEAT MARKET AND ABATTOIRS.—These are the most commodious and magnificent of the market buildings, and are situated in Bradford Street. The site was purchased by the Council in 1891, and has an area of 12,243 square yards. At that time about 650 square yards were held in reserve for future extension, but the whole of the site has now been built upon. The various blocks are grouped as follows :

1. Official block.
2. Twenty slaughterhouses for the use of the wholesale tenants, with lairage above.
3. Large hall for the sale of meat, both English and frozen, by wholesale.
4. Basement in which is the engine room, cold stores, and chill rooms.
5. Public slaughterhall for beasts, sheep, and calves, with lairs over, and also public slaughterhall for pigs.
6. Small office and building used for gut cleaning, tripe dressing, etc.

The hall of the market in which the sales are conducted is 365 feet long and 90 feet wide, and there are over seventy salesmen's stalls, while a complete system of overhead travelling rails for carrying meat to any part of the market or basement is a prominent feature. This basement, with its cold stores and chill rooms, is connected with the sales hall by three hydraulic lifts situated in the centre of the hall.

The cold stores have a capacity of 130,000 cubic feet for freezing and 70,000 cubic feet for chilling, and accommodation for 25,000 carcasses of mutton and 300 sides of beef, and are leased to a refrigerating company. On the south of the market is the public slaughterhall.

Growth of City's Meat Market.

The steady growth of the market may be gathered from the increase in the number of animals slaughtered there within recent years, viz. :

Year ending 31st March, 1921	...	...	...	258,222
" " " " 1924	...	...	...	279,545
" " " " 1925	...	...	...	332,243
" " " " 1926	...	...	...	331,103
" " " " 1927	...	...	...	392,387

The oldest market in the City is the Bull Ring Market, which is held every Tuesday, Thursday, and Saturday for the sale of poultry, rabbits, eggs, flowers, and shrubs. This market is an open-air market and occupies about 765 square yards.

The markets and market properties of the Corporation cover an area of nine acres, and the receipts for the first complete year (1852) amounted to £6,753, and for the year ended March, 1927, £86,092.

The Veterinary Department.

The duties of the Veterinary Department, with a veterinary surgeon superintendent at its head, are of such character that, for efficient administration, they are divided into three sections, each being controlled by the responsible committee concerned.

One section consists of work arising under Orders of the Ministry of Agriculture and Fisheries relating to contagious diseases of animals, including inspection of private slaughterhouses and inspection of meat and food other than those dealt with under the Food and Drugs Acts. The superintendent is Chief Veterinary Inspector for the City under the Diseases of Animals Acts, who is also the responsible officer of the Council in connection with portions of the Protection of Animals Act, 1911, relating to knackers' yards and Public Health Meat Regulations, and bye-laws made thereunder. This section is under the Markets and Fairs Committee.

Another section relates to work in connection with the Dairies, Cowsheds, and Milk Shops Orders in the milk-producing centres around the City area, and the eradication of tuberculosis from dairy herds. These duties are controlled by the Public Health Committee.

The third section is the control of the Corporation stud, including the purchase of new and the disposal of old horses, the buying of provender, shoeing material, etc., the superintendence of shoeing smiths, granary and stable men, and hiring of horses to various committees. This work is carried out under the Salvage and Stables Committee.

Chapter XI.

WEIGHTS AND MEASURES DEPARTMENT.

THE Weights and Measures Department, as is fitting, comes under the control of the Markets and Fairs Committee. When the Lord of the Manor possessed the market rights, the court leet exercised jurisdiction over the weights and measures used in the fairs or markets or by the shopkeepers within the manor. There is still in the department a bronze bushel measure which bears the inscription: "1674. Sr. Samuell Marrow, Lord of the Mannor of Birmingham. C. II. R."

Originally located in the old Public Buildings in Moor Street, the department was moved to the Smithfield Market Building, St. Martin's Lane. The present offices in Corporation Street, opened in 1913, were built to afford better facilities for carrying on its work, and the building has since been enlarged to make provision for testing and stamping glass measures.

Largest Vehicles Weighed at One Operation.

Attached to the office there is a twenty-five-ton twin weighbridge consisting of two machines, each with a platform 16 feet by 8 feet, linked up to one steelyard, and in such manner that they may be used separately or in combination. A space of 1½ feet between the two platforms, making the total stretch 33½ feet, allows the largest motor vehicles now on the road being weighed at one operation, and the axle weights of commercial motor vehicles can be readily ascertained.



BUSHEL MEASURE: MANOR OF BIRMINGHAM

The type of machine in use, known as the compound lever weighing machine, was invented about the year 1741 by John Wyatt, one of Birmingham's worthies, who worked for a large part of his life at the Boulton Foundry, Soho. The first specimen of the kind was laid down in Snow Hill in connection with the old Birmingham Workhouse, and a model of this machine is in the collection which is to be seen in the department.

A platform machine, with special fittings, has been provided in order to deal with motor cycles.

Prior to the introduction of Wyatt's machine, vehicles and their loads were weighed by means of a large steelyard fitted into the upper room of a building. Traces of these machines are still about in different parts of the country, and the remains of an old cart weighing machine can still be seen at Woodbridge, in Suffolk.

Nearly Forty Thousand Weighing Instruments Verified.

The work of the department may be classified under two heads: Out-door inspection and in-door verification.

Under the last-named during the year ended March 31st, 1927, 52,402 weights, 480,658 measures, and 39,889 weighing instruments were verified and stamped, including 435 appliances of metric denomination. Since 1914 the metric carat (200 milligrams), with its multiples and sub-multiples, has replaced the old carat weight, which was not of a Board of Trade denomination. The balance used for the verification of diamond weights is of one gram capacity and sensitive to .005 milligram. The main portion of the measures dealt with were half-pint tumblers for use in public houses, and the stamp of verification is imposed by a sand-blast machine electrically driven.

The department is authorized by the Board of Trade to undertake the adjustment of weights and measures, and the number corrected during 1926-27 was 26,113. Weighing instruments may not be adjusted by the inspectors. Twelve thousand one hundred and sixty-five loads passed over the weighbridge, the fees amounting to £322 16s. The total revenue of the department for the year was £5,114 10s. 7d. and the expenditure £8,230 4s. 10d.

Control of Petrol Measuring Appliances.

Prior to October 1st, 1926, the fees for verification were only payable when the instrument was found correct and stamped. Under the Weights and Measures (Amendment) Act, 1926, the fees are payable whether or not the apparatus is found correct or is stamped. No fee, however, is payable in respect of any weight, measure, or weighing or measuring instrument voluntarily submitted for re-verification, provided that at the time of such submission it bears a stamp of verification. This exception has been introduced so as not to interfere with the practice of traders submitting their weighing and measuring appliances in order to satisfy themselves that they are correct. Under the same Act the Board of Trade may, by regulations, apply the enactments governing the use of weights, measures, and weighing machines to such measuring instruments as they deem proper, enabling inspectors to control petrol measuring instruments.

Annual Inspection of Traders' Premises.

With regard to the out-door work, the Board of Trade requires all traders' premises where weighing and measuring appliances are used to be inspected at least once a year, with few exceptions. The number of premises liable to inspection within the city is estimated at 17,000. The weights which upon inspection are found to be light through ordinary wear and tear are marked by obliterating the stamp, and the trader is instructed to have the defective weights re-adjusted, which is mostly done by the department. In the central area the weights are sent to the office in Corporation Street; in outside areas the work is done at temporary stamping offices opened during the period that the inspector is working a particular neighbourhood.

Control for the sale of coal and coke, and also of bread, engages a considerable proportion of the inspectors' time, and a motor car belonging to the department carries a weighing instrument which is used for checking bags of coal.

Before the passing of the Sale of Food (Weights and Measures) Act, 1926, it was only in reference to coal, bread, and tea that an inspector was authorized to take proceedings for short weight, but now a whole host of groceries, cooked foods, and cereals are included. Butchers' meat is also required to be sold by net weight, and milk must be sold by measure and only in quantities of half-pint or multiples of half-pint.

Besides the ordinary verification work a considerable number of articles are checked as to weight or measure to settle disputes between buyer and seller, and all the modern equivalents of Sir Samuel Marrow's 1674 bushel measure are in the care of the department. In the open space behind the Town Hall public standards of length are installed, the mural standards comprising inch, foot, two feet, yard, and metre; the measures marked on the pavement being 100 feet, 66 feet, pole, and decametre.

Chapter XII.

ELECTRIC LIGHT AND POWER.

THE supply of electricity in Birmingham was first commenced by a small electric lighting company under a Provisional Order granted in 1882, and what now must be termed a miniature generating station was equipped by this company in the neighbourhood of Paradise Street to supply current to the Town Hall and adjacent buildings.

Owing, however, to the non-fulfilment of certain obligations by the company the Provisional Order was cancelled by the Board of Trade, and a new Order was obtained by the Birmingham Electric Supply Co., Ltd., who constructed and equipped a generating station in Dale End, where are now situated the headquarters of the City of Birmingham Electric Supply Department, the undertaking being purchased by the Corporation in 1900.

The decision of the City authorities to acquire and electrify the tramway system, and to cope with the growing demand for electricity for all purposes, led to a large generating station being established in Summer Lane in 1906. When the City boundaries were extended in 1911 the generating stations of the Aston Manor Borough Council and the Handsworth Urban District Council were acquired, both of which have since been converted into sub-stations.

Area of Supply over 225 Square Miles.

The Electric Supply Department expanded rapidly, and in 1914 the City Electrical Engineer prepared plans for the erection of a new generating station at Nechells, with railway and canal facilities, and with an ample supply of water available. Owing to war conditions construction was deferred, but the demand for electric power in the production of munitions became so great that the construction and equipment of a temporary station was expeditiously carried out with the approval and support of the Government.

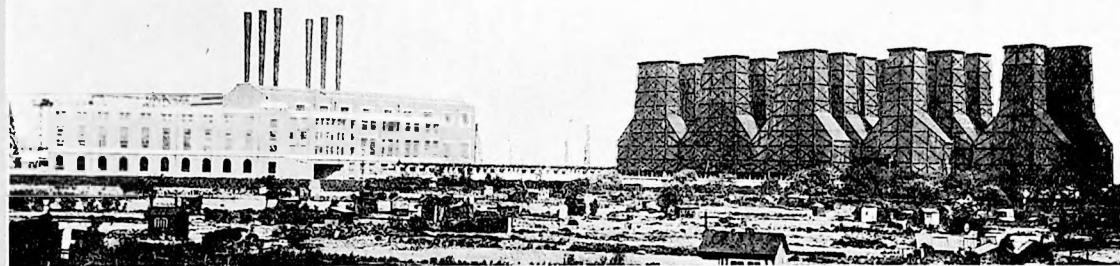
In 1918 work was resumed on the permanent generating station, and it was opened by the Prince of Wales in 1923. In its Prince's Generating Station, Nechells, the City of Birmingham undoubtedly possesses one of the finest and most efficient stations in this country.

The department now supplies current to areas of the Urban District Council of Perry Barr and the Rural District Councils of Meriden and Solihull, thus increasing the area of supply from 68 to 227 square miles. The Nechells Station will soon be working at its full capacity, and preparations are being made for the erection of a new super-generating station at Hams Hall, adjacent to the North Warwickshire coalfield. The consumption of coal at the generating stations in 1927 exceeded 400,000 tons, and the daily output in the winter months approached one and a quarter million units.

Favourable Tariffs.

The favourable tariff for electrical energy offered by the department has been of great assistance to local manufacturers, who have not been slow to take advantage of the facilities offered. During the year ended March 31st, 1927, the horse-power of consumers' motors and power plant added to the mains totalled 20,100. These striking figures are convincing testimony of the ever-increasing demand of Birmingham's industries for an adequate electricity supply.

The department offers manufacturers motors from one-half to fifty horse-power on hire and maintenance terms at annual rentals from £3 5s. upwards, and under this scheme there are now no fewer than 2,193 motors,



PRINCE'S GENERATING STATION, NCHILLS.

totalling 13,875 horse-power, installed on consumers' premises. For the large scale manufacturer the department supplies current at high pressure taken to transformers fixed in a small lock-up chamber on the consumer's works, and there reduced to the voltage required for power and lighting purposes.

The shopkeeper is catered for as well as the power consumer, and a large number of shop lighting installations may be seen in the City, the number increasing as tradespeople realize the advantage of illumination based on sound scientific principles.

To enable them to reap the full advantage of their occupancy of highly-rated premises, they are offered a special low rate for current supplied to light shop windows after the normal closing hour—for shopkeepers an invaluable form of advertising and for the public a gain in the enhanced lighting of the streets. Illuminated signs are also encouraged by a special tariff. The electric lighting of the Broad Street corner by means of the half-watt lamps is an excellent example of Birmingham's street lighting.

Domestic Lighting and Heating.

It has been the policy of the City Council, as well as the private builder, for some time past to instal electric lighting in all new property, and in some houses heating and cooking circuits are also installed. This has led to large extension of the electricity mains during the year ended March 31st, 1927, the new mains laid totalling 168 miles. The total expenditure on the provision of mains incurred by the department up to the end of this period exceeds £2,620,000.

City Show Rooms.

In 1923 extensive showrooms were opened in Paradise Street—a central position near the Town Hall. Here weekly demonstrations of electrical cooking are given, and of other domestic apparatus from time to time, a lady demonstrator being in attendance.

The success the department is achieving in their effort to educate the public in the many uses of electricity, more especially in the home, is shown in the following table of the last four years' development :

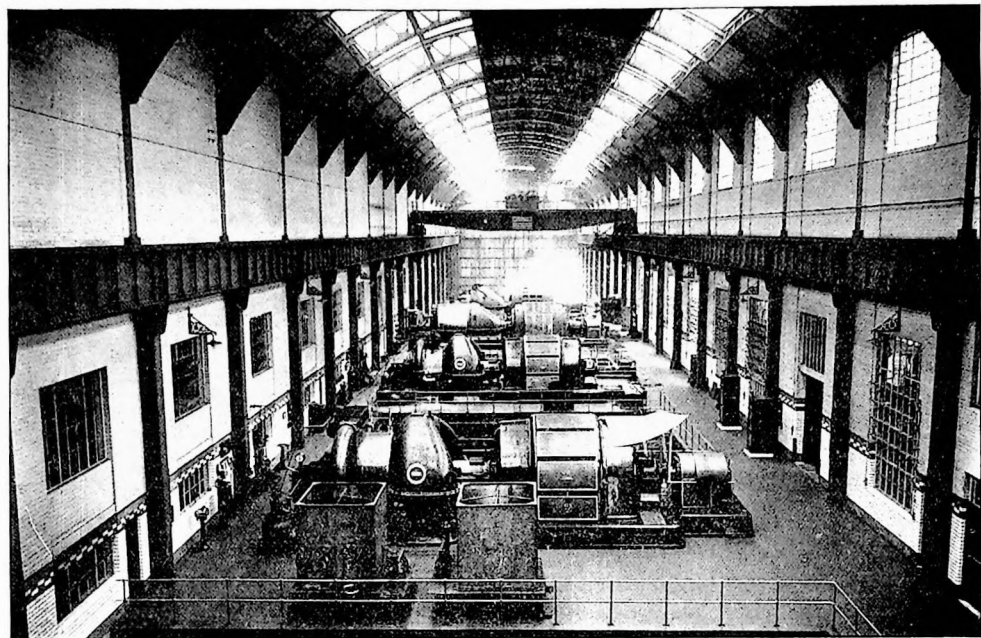
Year ended 31st March.	Consumers connected.		Heating, Cooking, and Domestic Apparatus.	
	During year.	Total at end of year	Kilowatts connected during year.	Total Kilowatts connected at end of year.
1924	4,138	22,675	1,689	6,145
1925	5,521	28,196	2,867	9,012
1926	8,905	37,101	3,829	12,841
1927	10,507	47,408	4,271	17,112

In May, 1927, the department opened a new showroom at Station Road, Solihull, and, although supplies in this neighbourhood have only been furnished for a few months, 1,050 consumers have been connected. It is also hoped to extend the use of electricity for agricultural purposes in this area.

Development.

The revenue, loan charges, working costs, and profits, also the large sums transferred from surplus to relief of rates, are given in the chapter on the City's finances.

Citizens have reason to be proud of their Electric Supply Department. The acquisition of the undertaking in the year 1900 has proved one of the wisest steps taken on their behalf, and it is now undoubtedly one of the most valuable of the City's assets.



GENERAL VIEW OF ENGINE ROOM, NECHELLS ELECTRICAL WORKS, SHOWING
15,000 R.W. TURBO ALTERNATORS.

Chapter XIII.

TRANSPORT BY TRAMCAR AND OMNIBUS.

BIRMINGHAM folk, in the early days of tramways, instead of allowing private companies to lay down tracks in the streets of the city as in most towns in the country, constructed the tramways themselves, afterwards leasing them to companies upon terms which repaid the capital outlay within the periods of the leases.

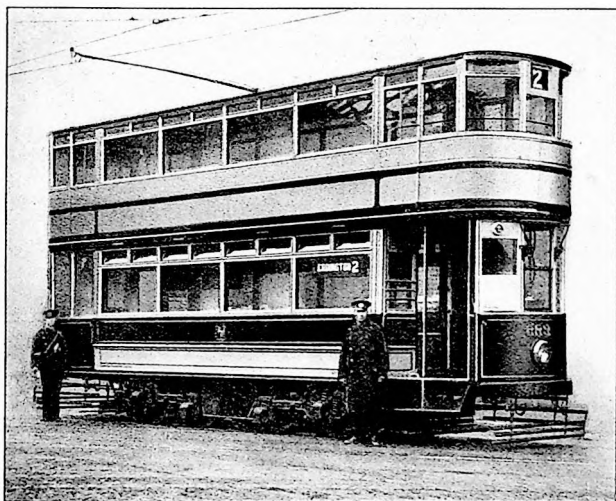
In this way the Corporation have always had control of the streets. The foresight and wisdom of Birmingham's municipal representatives were realized by citizens when, on January 1st, 1907, the leases of the bulk of the lines expired and the lines came into the hands of the Corporation without a penny of cost. In other areas local authorities allowed companies to construct and own the lines, and later had to buy out the companies' interests.

The tramway history of the City opens in 1873-5, when horse-drawn vehicles were first used on the Handsworth and Bristol Road routes, the former being soon afterwards converted to the cable system. Steam traction was introduced in 1884.

The Birmingham Corporation Act, 1903, empowered the Corporation to operate tramways themselves, and on January 4th, 1904, the Tramways Department commenced a service of cars between Steelhouse Lane and Aston Brook Street, which a little later, by arrangement with the company operating the Aston lines, was extended to Aston Cross. At that time the department possessed twenty tramcars and one depôt, which had capacity for twenty-four cars.

Conversion of Old Horse and Steam Tramways.

During the years 1904-1907 the department was making arrangements for taking over the steam and horse-operated lines, the leases of which were



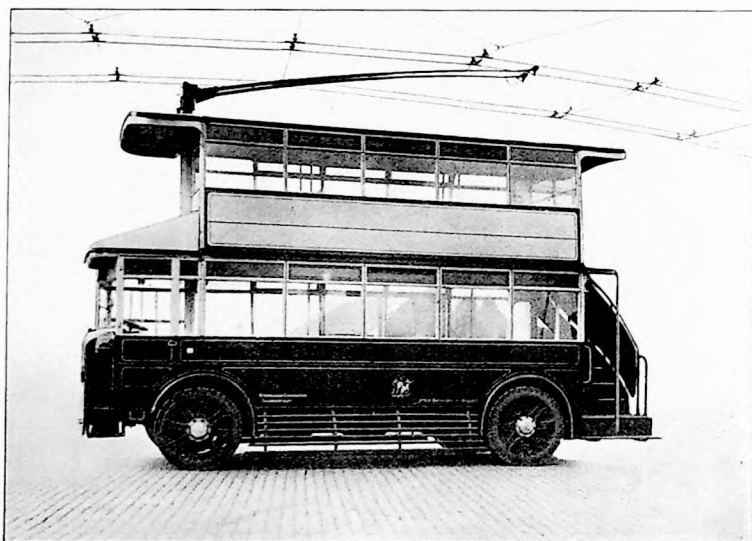
LATEST TYPE BIRMINGHAM CORPORATION TRAMCAR.

due to fall in on December 31st, 1906. In acquiring depôt sites, erecting the depôts, and other works incidental to the taking over of the tramways, in no case was it necessary, either then, or, indeed, at any time since in the history of the department, to call in the services of consulting engineers, all the work being carried out under the direction of the department's own staff. In addition to this work, other new routes were constructed and opened for traffic, viz. :

Lodge Road route, April 14th, 1906	Bolton Road route	} Jan. 1st, 1907.
Ladywood route, Oct. 17th, 1906.	Cannon Hill "	
Dudley Road and Heath Street routes, July 1st, 1906.	Stoney Lane "	
Bordesley Green route, Nov. 26th, 1906.	Leopold Street "	
	Alum Rock "	

The statutory powers for these tramways, with the exception of the Dudley Road line, were obtained under the Corporation Act of 1905.

On December 31st, 1906, the Moseley Road, Balsall Heath, Coventry Road, Stratford Road, Nechells, Newtown Row, and Saltley routes, which up till then had been run as steam or horse tramways, were taken over by the department and electric traction substituted the following morning—a remarkable achievement when it is remembered that to equip these routes no less than 200 cars had to be obtained, manned, and put into operation. The running to King's Heath involved arrangements with the King's Norton Council, and inter-running arrangements were made with the old company with regard to the Stratford Road and Coventry Road routes, so far as the portions in Yardley were concerned. In 1907 the department took over the Erdington Tramways for the Erdington Urban District Council, and the Perry Barr line for the Handsworth Urban District Council.



RAILLESS TROLLEY VEHICLE.

By this time the business of the department was attaining some magnitude, the accounts for the year ended March 31st, 1908, showing: Receipts, £289,556; mileage, 9,960,587; passengers, 75,601,195 (the equivalent of carrying the population, then estimated at 553,155, 136 times).

Handsworth Cable Tramway and Bristol Road Route Taken Over.

In 1911 the old cable tramway to Handsworth and the Bristol Road and Cotteridge lines were taken over. On January 1st, 1912, which immediately followed upon the extension of the City boundaries, when the Urban Districts of Handsworth, King's Norton, and Yardley, and the Borough of Aston Manor, were incorporated within the City, the old tramway company, which owned the operating rights in the three latter areas, was bought out. This added some twenty miles to the route mileage.

Extensions.

Since 1912 the tramways have steadily expanded, notable additions to the routes of the City being:

Stockland Green, July 12th, 1912.

Wheeler Street, Nov. 20th, 1912.

Oxhill Road, Dec. 20th, 1912.

Hagley Road, Sept. 5th, 1913.

Livery Street, June 10th, 1913.

Extension of Stratford Road route
from College Road to Hall

Green, May 31st, 1914.

Accock's Green, Feb. 2nd, 1916.

*Tyburn Road, May 13th, 1920.

*The Bristol Road Extension from
Selly Oak to Rednal, April
14th, 1924.

*Bordesley Green East, Nov. 4th,
1925.

*Short Heath, June 23rd, 1926.

*Pype Hayes, Feb. 21st, 1927.

* Sleeper track construction.

Birmingham has one of the most up-to-date tramways on sleeper track construction in the country, laid upon a road which is probably one of the finest in Great Britain. The Bristol Road section is illustrated in the chapter on the doings of the Public Works Department.

Tramway Department Buys Out Motor Omnibus Company.

An outstanding feature has been the development of motor-omnibus services run in conjunction with the tramways, and the institution of a service of railless vehicles, or trolley omnibuses, in place of the tramway route to Nechells. The operation of motor-omnibuses commenced in July, 1913, when ten vehicles were placed in service between Selly Oak and Rednal as an extension of the Bristol Road tramway.

Powers already existed under the 1903 Act to run motor-omnibuses in prolongation of tramway routes, but further scope in this direction was desirable, and general omnibus powers were obtained under the Birmingham Corporation Act, 1914. The department then bought out the only company operating omnibuses in the City area, and has so developed this business that to-day it has something like 200 motor omnibuses running in services on sixteen different routes, the great majority of which are top-covered double-deck type.

The trolley omnibus service to Nechells has the distinction of being the first in the country to be operated with top-covered double-deck vehicles, and was also the first tramway route in the country to be converted to the trolley omnibus system. It has attracted the attention of transport operators all over the world, many deputations having visited Birmingham to inspect this mode of transport.



SIX-WHEELED OMNIBUS.

1904-5 and 1926-7 Compared.

The statistics set out below show the work of the Tramways Department to-day as compared with its small beginnings in 1904 :

				Year ended March 31st, 1905.	Year ended March 31st, 1927.
Capital authorized	...	...	...	£50,000	£3,969,207
Capital borrowed ...	...	...	...	£50,000	£3,500,212
Capital expended ...	...	...	...	£50,000	£3,408,576
Amount of Capital paid off	...	...	...	£1,372	£1,483,773
Loans outstanding	...	...	...	£48,629	£2,016,439
Population served (approximately)	...	...	...	543,000	1,000,000
Revenue ...	{	Tramways	...		£1,391,082
		Omnibuses	...	£19,103	£347,119
		Railless	...		£28,165
Route mileage ...	{	Tramways	...		77 m. 62 chs.
		Omnibuses	...	1 m. 66 yds.	63 m. 1 ch.
		Railless	...		2 m. 35 chs.
Miles run ...	{	Tramways	...		19,156,438
		Omnibuses	...	216,235	5,245,703
		Railless	...		382,062
Passengers carried	{	Tramways	...		237,785,066
		Omnibuses	...	4,709,798	43,340,165
		Railless	...		5,731,133

The Tramways and Omnibus Department is a large business undertaking, and since its establishment has contributed a total of £569,077 to the rate funds.

War Time Troubles.

During the Great War difficulty arose in maintaining the services owing to the large percentage of employees that entered His Majesty's forces, and it became necessary to engage women conductors, over a thousand being constantly engaged. Altogether 3,000 had to be trained in these duties. Owing to the severe conditions in Birmingham they were not employed as drivers, the services of auxiliary motor-men from all classes, including doctors, lawyers, clergymen, and others, helping over the rush periods of the day. This was the first tramway undertaking to utilize this form of assistance. The department has a pay roll of 5,250 workers.

Outside Running.

Birmingham operates the tramways in West Bromwich for the West Bromwich Corporation, and also part of a company's system between Great Bridge and Dudley, seven and a half miles of track in all.

Chapter XIV.

ESTATES DEPARTMENT.

THE Corporation estates throughout the City and the properties thereon are under the control of an Estates Department, whose duties consist of:

- (a) The management of all municipal houses erected throughout the City, together with all other properties owned by the Corporation, but not immediately required for civic purposes; and
- (b) Carrying into operation the provisions of Part II of the Housing Act of 1925 or any amending Act dealing with slum clearance and relative schemes.

Under (a) the department has to deal with the housing of the working classes, though it does not actually erect houses. The Estates Committee has the trying responsibility of allocating the erected houses amongst the many thousands who make application for them, and thereafter such houses are managed by the Estates Department.

When the Armistice was signed in 1918 it was found that the housing shortage—which was beginning to make itself felt even before the war time cessation of building operations—had become an acute problem, and 14,000 houses were required to make up the shortage in Birmingham.

First Municipal Houses.

In 1920 the first houses erected under the Housing and Town Planning Act of 1919 (Addison Scheme) were available for allocation. Since that date Birmingham has struggled to meet the urgent needs of its citizens, and the following figures show what has been achieved in dealing with the situation up to December 31st, 1927.

	No. of houses handed over for management.	Lt.	Sold.	Pending at date of statement.
1919 Scheme	... 3,222 106*	3,289	39	—
1923-24 Scheme	... 15,105	12,321	2,715†	69
	18,433	15,610	2,754	69

* War camp hutments converted into approved dwellings for 106 families.

† Includes houses for police accommodation, etc.



FOX HOLLIES ROAD, HALE GREEN.

These figures will give some idea of the extent of the Corporation's ownership of house property in the City, and explains why at a function held in Birmingham the Chairman of the Estates Committee responded to the toast, "The health of the Biggest Landlord of the City." In addition to the Assisted Scheme houses there are over 200 other properties belonging to various departments which are managed by the Estates Departments.

Improvement Schemes.

There is also the Dwelling House Improvement Scheme associated with the municipal activities of Mr. Joseph Chamberlain, consisting of property acquired under the powers of the Artisans' and Labourers' Dwellings Improvement Act, 1875. This scheme, which involved the clearance of a large unhealthy area and the construction of a fine central thoroughfare (Corporation Street), covers an area of about 93 acres, of which about 43½ acres were purchased by the Corporation at a cost of £1,700,000, and many model dwellings were subsequently erected thereon. There are 560 weekly dwellings in the area, which produce a gross annual income of £11,100, and from quarterly properties and ground rents the annual income is about £61,200. The necessary capital for this scheme was raised by Corporation stock, partly at three and a half per cent. and partly at three per cent. on a sixty years' basis.

The department is now engaged on a somewhat similar, though much smaller, scheme in New Summer Street, which has been represented as an unhealthy area by the Medical Officer of Health. It will be dealt with under item (b) of the work of the department as set out in the opening paragraph. The area concerned comprises about eleven and a half acres, and about 500 houses are affected.

Housing Survey. Applications for Houses.

In 1926 the Estates Committee, acting under instructions from the City Council, carried out a special survey of the housing needs of the City, and an exhaustive report presented to the Council disclosed the following position :

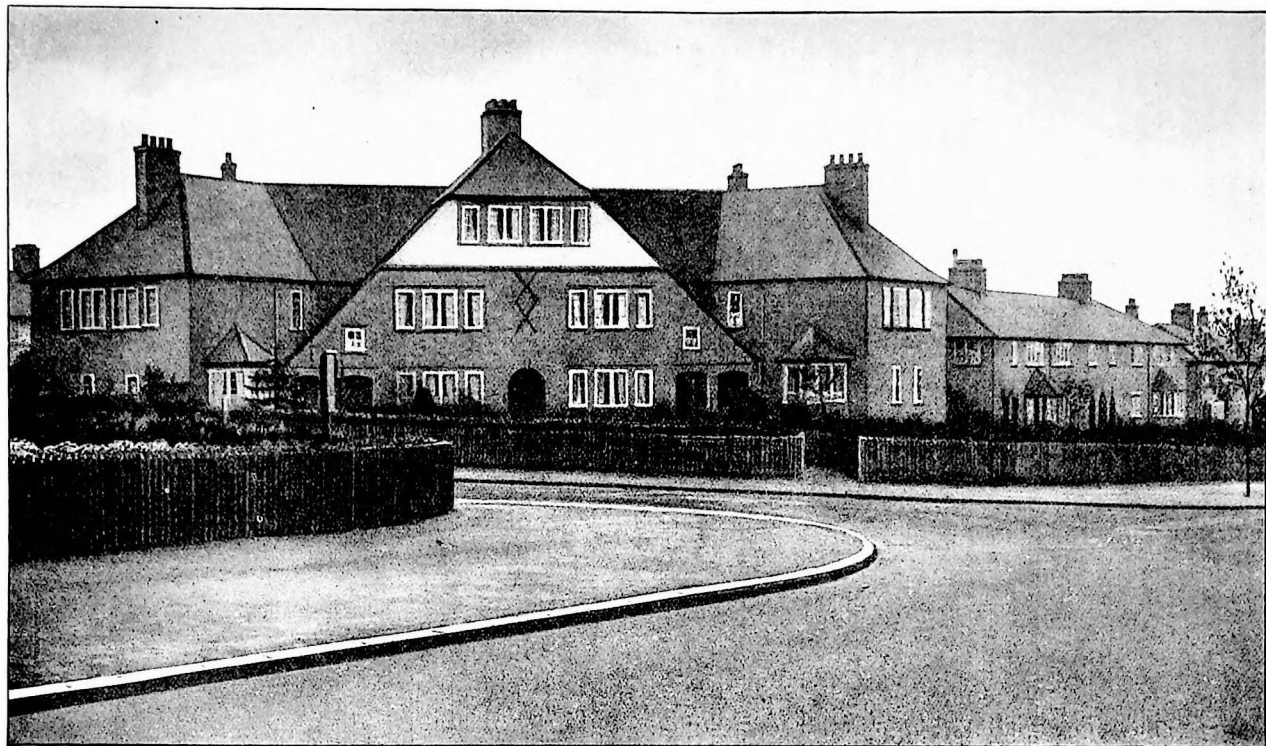
Total number of registered applicants still waiting for accommodation (including those who were considering house purchase)	20,612
Registered applicants from whom no information had been received during last eighteen months	4,481—25,093

For contrast note the following :

The register in December, 1927, showed :	
Total number of registered applicants still waiting for accommodation (including those who were considering house purchase)	27,436
Registered applicants from whom no information has been received during last eighteen months	4,111—31,547

Completed application forms for the tenancy of municipal houses are dealt with by a system which ensures that due regard is paid to income, necessity, child category, etc., and the exact position of the application on the register of unallocated applicants.

A system of "exchanges" has been instituted by the department, which has been made possible by the cordial co-operation of estate agents



BILLESLEY FARM ESTATE, KING'S HEATH.

and property owners in the City. The following is a specimen "exchange" case :

Brown, the tenant of a whole house, privately owned, desirous of larger premises, makes application in January, 1927, for a municipal house, and, because of the "youth" of his application, and the fact that he is a tenant of a whole house, the department are unable to do anything for him.

Smith applied in 1925 and is due for allocation, but, because of smallness of income, cannot be given a municipal house. Brown's landlord is approached and agrees that if Brown is given a municipal house, to accept Smith as his tenant. The matter is arranged, and *two* applicants are suited and are allocated houses for which they can pay the rent.

House Purchase through the Municipal Bank.

A House Purchase Scheme has been adopted by the Corporation. It is possible by this means to purchase on a ninety-nine years' lease a parlour-type Council house, with a minimum deposit of £25, or a non-parlour type house, with a minimum deposit of £20, the balance of the purchase price being secured by means of a mortgage with the Birmingham Municipal Bank. Sitting tenants are enabled to purchase the house they occupy on payment of a deposit of one per cent. of the purchase price.

The weekly commitments to cover interest on loan, repayment of loan, rates, etc., are for the first year approximately 22s. 6d. for a parlour type house and 19s. for a non-parlour type house. The period for repayment is spread over twenty years, and the payments are reduced *pro rata* until in the twentieth year the weekly payments are, approximately, for a parlour type house 9s. 6d. and for a non-parlour type house 8s.

Rent Collection and Supervision.

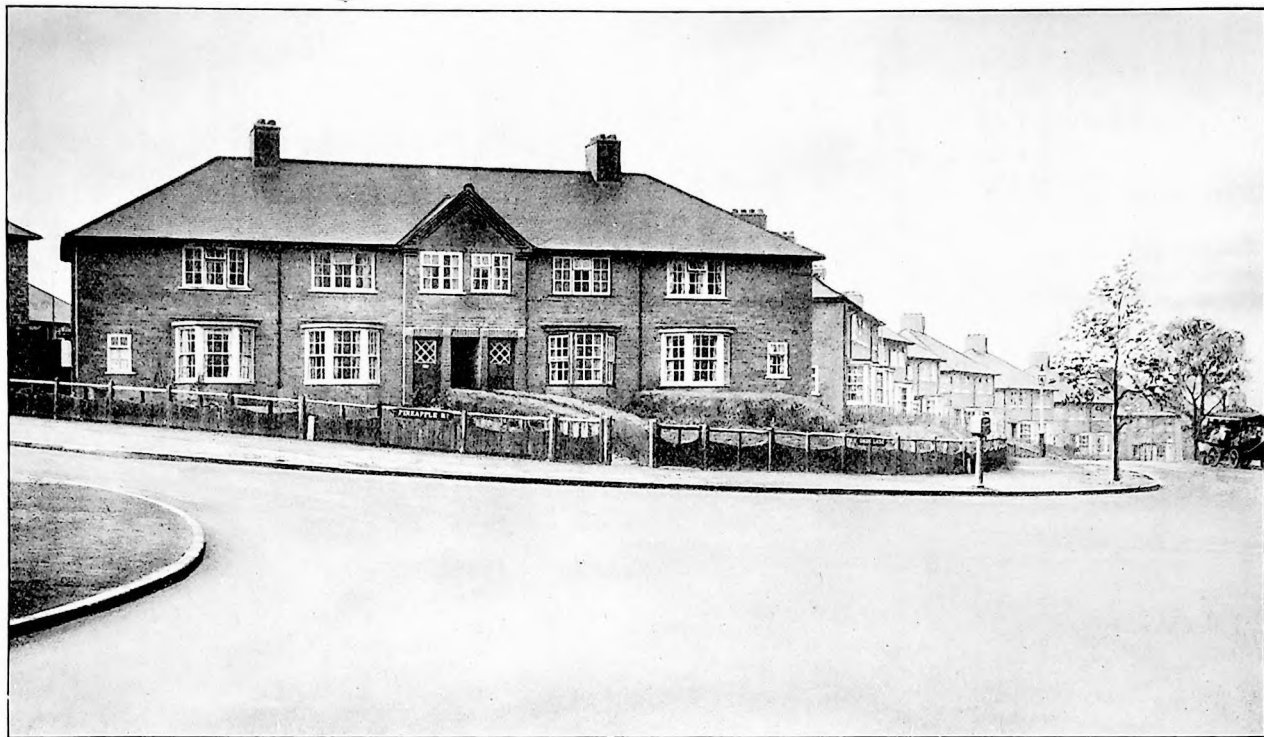
The work of collecting the rents of the weekly properties managed by the department is carried out by twenty-six collectors, seventeen of whom are district collectors resident on the estate in their charge, the remaining nine being attached to Head Office. General supervision and maintenance of the amenities of the estate form part of their duties.

There are five collection districts, which work in close conjunction with the various administrative sections of the department.

A qualified supervisor of gardens is on the staff of the department, and information and advice is always at the disposal of the tenants. Largely owing to the generosity of the Birmingham Common Good Trust, competitions have been held the last few years for the best municipal gardens and the best show of fruit; and the publication since 1925 of a municipal calendar containing useful hints on the care and maintenance of house property, and the cultivation and cropping of the gardens, has been of great value. The Common Good Trust also assisted to defray the cost of printing and publishing these calendars, which are presented free to every municipal tenant.

On the all-important question of repairs the Estates Department have taken the municipal motto, "Forward," for their guide, and carry out all necessary repairs and re-decorations departmentally. Repair depôts have been established at various points, each with its staff in charge of a works manager.

The Estates Department also have under their management and control some fifty agricultural tenancies, representing an area of over 1,200 acres.



DAD'S LANE FARM ESTATE, KING'S HEATH.

Some idea of the extent of the estates managed by the department for the citizens of Birmingham may be gathered from the following table :

Approximate annual value of weekly rent collection ...	£516,839
Approximate annual value of all other quarterly rents and ground rents ...	£122,440
Approximate amount paid annually in poor rates and water rates ...	£166,700

Chapter XV.

PUBLIC BATHS AND WASH-HOUSES.

It is interesting to recall how public washing facilities were first introduced into this country. In 1832, when cholera raged in Liverpool and cleanliness was urged as a most important factor in combating the epidemic, a Mrs. Catherine Wilkinson, a labourer's wife, afterwards known as "Kitty of Liverpool," offered to her less fortunate friends the use of the copper and drying ground of her humble abode. Aided by the District Provident Society and some benevolent persons, this courageous and large-hearted woman enabled washing for about eighty-five families to be done weekly for about six years, for which a modest charge of one penny was imposed per wash to assist in defraying the expenses.

This pioneer work was reflected in the press, and at public meetings throughout the country. Following this publicity, a meeting was convened in the Town Hall of Birmingham on November 19th, 1844, at which a committee, afterwards called the "Public Baths Association," was formed, and the sum of £4,400 raised by subscription towards the provision of public washing facilities. A site fronting Kent Street and Gooch Street was acquired, but nothing further was done, as it became known that legislation was contemplated to enable public authorities to raise capital for the purpose.

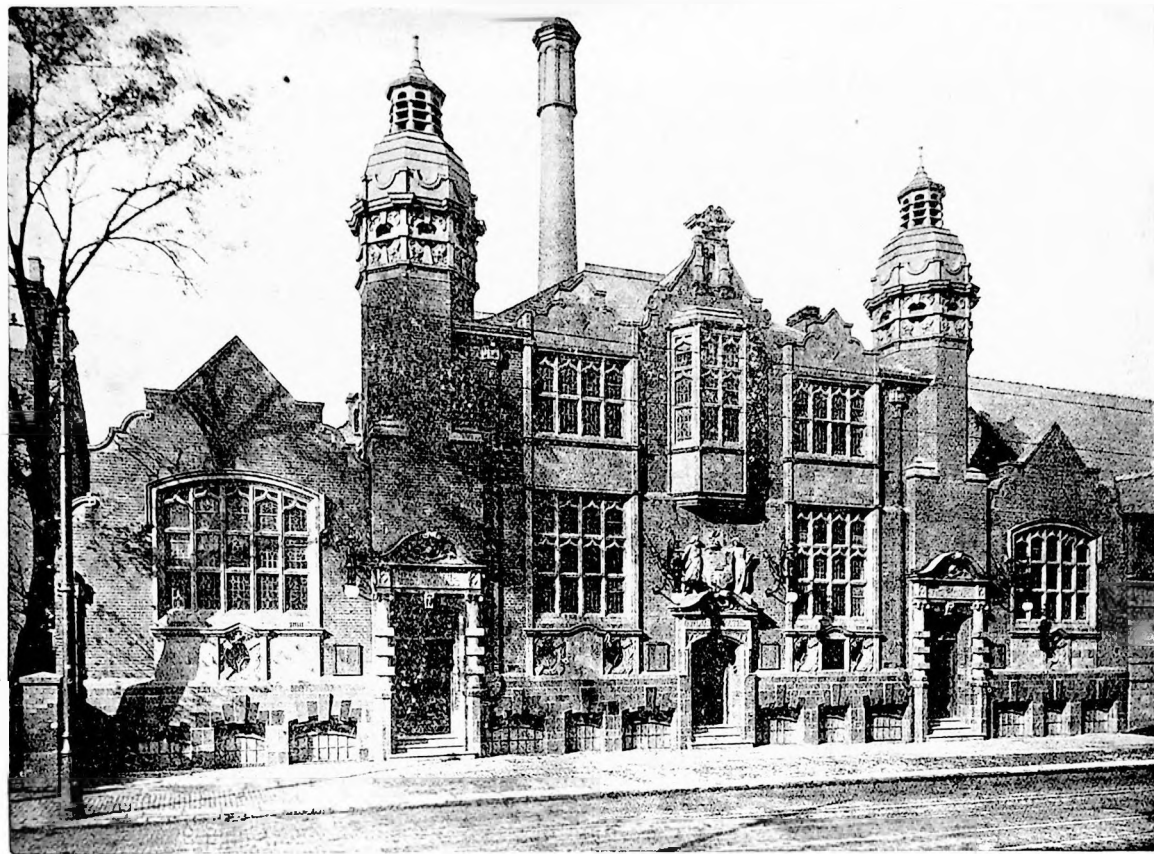
First Municipal Baths and Wash-houses.

After the passing of the Baths and Wash-houses Act in 1846 the interests of the Association were vested in the Town Council, and in October, 1848, the Council sanctioned the erection of the first suite of baths and wash-houses on the site purchased by the Association, at an estimated cost of £10,000.

The scheme included two swimming ponds, sixty-nine washing baths, three plunge baths, laundry, and a public wash-house containing facilities to enable twenty-five persons to do their washing at one time. This building was opened in May, 1851, and during the first year the attendance of bathers numbered 78,715. The public wash-house did not at first prove the success that was anticipated, owing to landlords providing wash-houses in the courtyards for their tenants.

Two Million Bathers at Public and Private Baths.

The demand for public baths has probably been as great in Birmingham as in most other large towns or cities in this country. The number of bathing establishments and open-air baths which have been added since the



MOSELEY ROAD BATHS.

original Kent Street establishment was erected is shown in the following list :

Bathing Establishment or open-air Baths.	Date opened.	Swimming Baths.	Private Baths.
Bournville Lane	25- 7-1911	1	19†
Erdington	6- 5-1925	1	24*†
Green Lane	29-10-1902	2	44
Grove Lane	29- 1-1907	2	23*
Harborne	13-12-1923	1	37
† Kent Street (Old)	12- 5-1851	2	54
„ „ (New)	30- 3-1914	1	18
King's Heath	15- 8-1923	1	40
Monument Road	27- 2-1883	2	45*
Moseley Road	30-10-1907	2	46
Nechells	22- 6-1910	1	29
Northwood Street	5- 3-1862	2	51
Saltley	30- 7-1924	1	—
Tiverton Road	29- 8-1906	2	26
Victoria Road	5-10-1892	2	24
Woodcock Street (re-constructed)	14- 4-1926	2	35
Cannon Hill Park (re-constructed)	15- 6-1921	1	—
Victoria Park (re-constructed)	14- 6-1922	1	—
Bacchus Road Cottage	29- 2-1912	0	26
Brearley Street Cottage	29- 2-1912	0	18
Coventry Street Cottage	1-10-1908	0	29
Lower Dartmouth Street	29- 6-1914	0	24
Grosvenor Road	12- 7-1924	0	28
Saltley (Norton)	13- 6-1923	0	44
Willis Street	12- 7-1924	0	34
Central Laundry, Woodcock Street	14- 4-1926	0	—

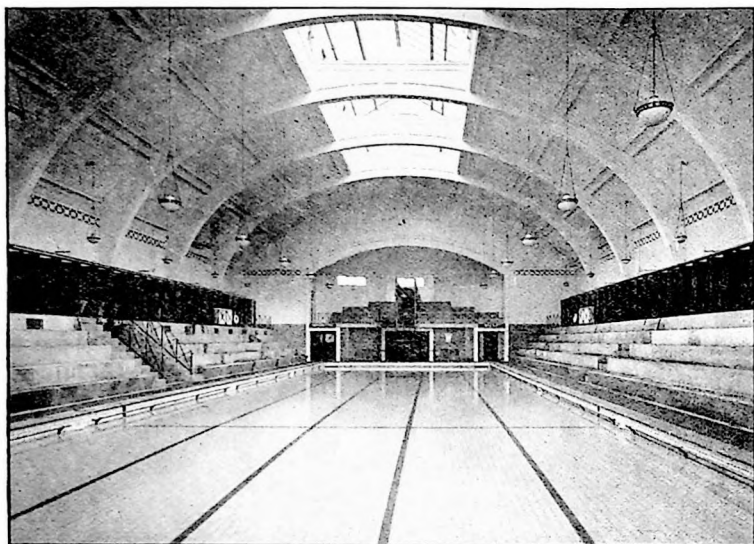
* Also Turkish Baths.

† Also Russian Baths.

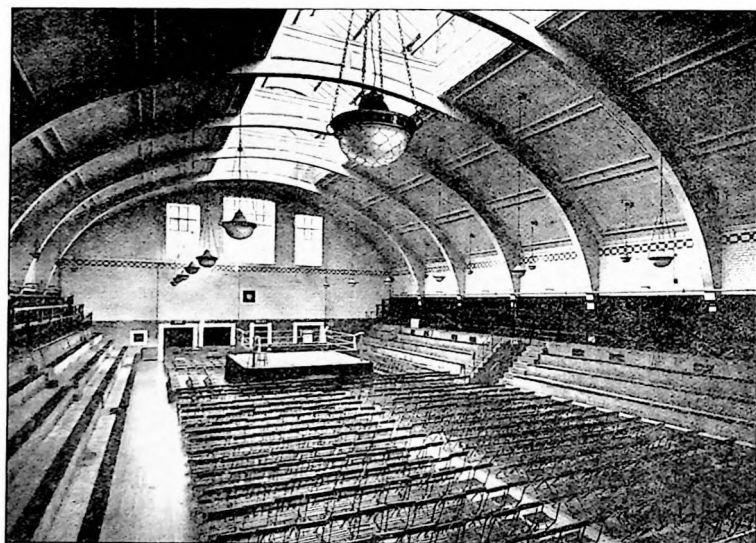
‡ Closed for demolition.

During the year 1925-1927 there were two million bathers at the private, swimming, Russian, and Turkish baths. No specialized treatment is given at the two last.

Since 1918 the accommodation of dwelling houses in the industrial area of the City has been considerably over-taxed, resulting in a pressing demand for the provision of public wash-houses. In order to meet the needs of one of the most congested areas, where the death-rate is among the highest in the City, the Council sanctioned the erection of a modern wash-house in St. George's Street, Hockley. This wash-house, which was opened by the Lord Mayor in January, 1928, is equipped with twelve power-driven washing machines, twelve hand-wash stalls, six electrically-driven hydro extractors, five power-driven mangles, and twelve drying cabinets. These machines materially reduce manual labour, enable an average week's washing for a family of five to be completed in from two to three hours, including drying, mangling, and ironing—a boon and a blessing to the citizens who use the building. This wash-house is large enough for dealing with the weekly washing of about 600 to 650 families, and at a charge of about 1s. 3d. per wash it will be practically self-supporting.



GALA SWIMMING BATH, WOODCOCK STREET.



THE ABOVE BATH AS ASSEMBLY HALL.

Swimming Clubs. Mixed Bathing.

There are about sixty swimming clubs in the City, which meet in the various baths and give instructions in swimming, life-saving, and diving, organize races, water polo, and other aquatic events, and afford recreation and amusement to all those interested in swimming; this fact probably accounts for the high position Birmingham now holds amongst swimmers. Mixed bathing has been permitted at the appropriate establishments since 1914, and is very popular, as it affords families and friends the opportunity to bathe together. The greatest use of the swimming baths is made between April 1st and September 30th.

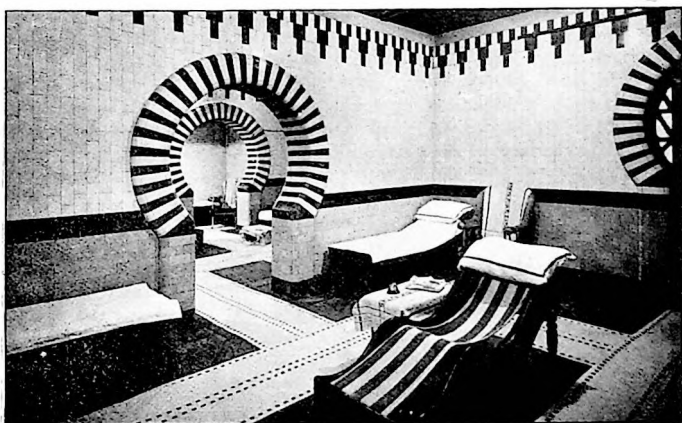
Assembly Halls.

During the winter months several of the swimming baths are closed and converted into spacious assembly halls for large concerts, at which seating accommodation for 1,600 can be made, or, alternatively, dance halls for from 600 to 800 dancers. About 2,040 separate lettings are possible for dances, boxing exhibitions, gymnasium displays, lectures, and public meetings, and on Saturday evenings, generally speaking, about 10,000 people are to be found in the several assembly halls of the department enjoying recreation in some form or other.

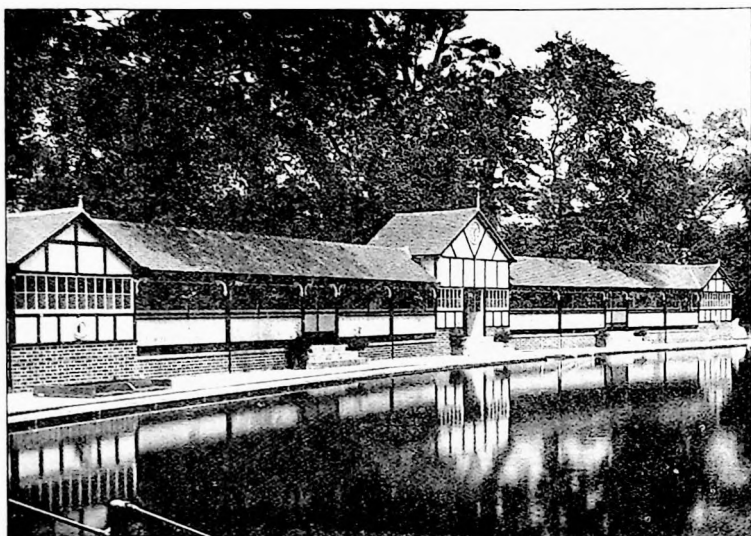
The Gala Bath for Championship Events.

The Gala Bath at Woodcock Street, opened on May 14th, 1926, is regarded by the Amateur Swimming Association as the best known to them for its purpose, being used for international and championship swimming events. It is of special design, and has seating and standing capacity for about 1,900 persons. The water area measures 100 feet by 35 feet, and the bath has a capacity of 120,000 gallons. To warn bathers of their approach to the deeper water a red line is inserted in the tiling of the bottom and the sides of the bath.

The diving stands are of a design approved by the Amateur Diving Association, the topmost board being 16 feet 3 inches from the surface of the water. Dressing boxes on the upper promenade are collapsible to



HOT ROOM, TURKISH BATH, GROVE LANE, HANDSWORTH.



DRESSING PAVILION, CANNON HILL BATH.

provide accommodation for spectators when the bath is being used for gala or sports, and dressing rooms for competitors are provided under the galleries.

Behind this bath is situated a central laundry—the largest of its kind in the country—which deals completely with the towels and linen from all bathing establishments of the City. Thirty-two thousand towels, equivalent to twenty-one miles of towelling, are washed, sterilized, dried, ironed, and folded on a normal summer day.

Cottage Baths, Children's Bathing, etc.

A type of bathing establishment almost exclusive to Birmingham and Bradford is what is known as "Cottage Baths," which originally consisted of a cottage in which a boiler and a few washing or private baths for both sexes were either fitted into existing rooms, or additions made to the building to accommodate them, and could be managed by special arrangement with a minimum of staff at little expense. This system enabled more establishments to be provided for bathers, at less capital expenditure and consequently facilitated the introduction of lower admission charges. A mother can bring little children to these baths and give them a good bath at "two a penny." To-day the so-called "cottage baths" are fitted with a large number of washing baths instead of a few, and are erected among the older and poorer class dwellings.

When Mr. Joseph Chamberlain was a member of the City Council he advocated that special concessions and reduced rates for the admission of scholars to the public baths should be granted. To-day children of the elementary schools attend the baths free of cost to themselves during school hours. Such services cannot be assessed commercially, and due regard is paid to this aspect by legislation, which permits a Baths Department to be a charge on the rates.

At several of the larger establishments the water is obtained from a borehole on the site, and in all other cases from the City's supply mains.

Chapter XVI.

PARKS AND RECREATION GROUNDS.

THE Parks and Recreation Grounds belonging to the City comprise a total area of 2,697 $\frac{3}{4}$ acres and consist of thirty-two parks, fifty-four recreation grounds, and nineteen small open spaces.

The movement for providing Birmingham with open spaces commenced in the latter half of the nineteenth century. The first public park to be provided was Adderley Park, which was opened to the public in 1856, and since then the acquisition of open spaces has proceeded more or less steadily.

Adderley Park.

Adderley Park comprises eleven acres, and was acquired in 1855 from Mr. Charles Bowyer Adderley (afterwards Lord Norton) on a lease for 999 years at a nominal rent of 5s. a year. The opening was celebrated by a dinner at which 400 guests were present. Richard Monckton Milnes (afterwards more widely known as the first Lord Houghton) wrote an ode for the occasion, which was set to music by Dr. Belcher, a Birmingham organist, and was sung at the concert which followed the banquet. The original MSS. of this ode is preserved in the Reference Library, together with printed copies published for the occasion. Lord Norton subsequently helped to make several additions to the park.

Aston Park and its Associations.

Aston Park, with its historic hall, was first acquired by a private company and opened to the public in 1858. It was ultimately obtained by the Town Council in September, 1864, when the hall and park were opened to the public for their use and enjoyment for ever.

The fine old hall is the chief attraction at Aston. Built in 1635, it was described by Dugdale, who must have seen it in its pristine newness, as "a noble fabrick, which for beauty and state much exceedeth any in these parts." King Charles I slept there on the Monday before the battle of Edgehill, in 1642, and the fine staircase, with its broken baluster, was damaged during the three days' siege of the hall by the Parliamentary forces in the December of the following year.

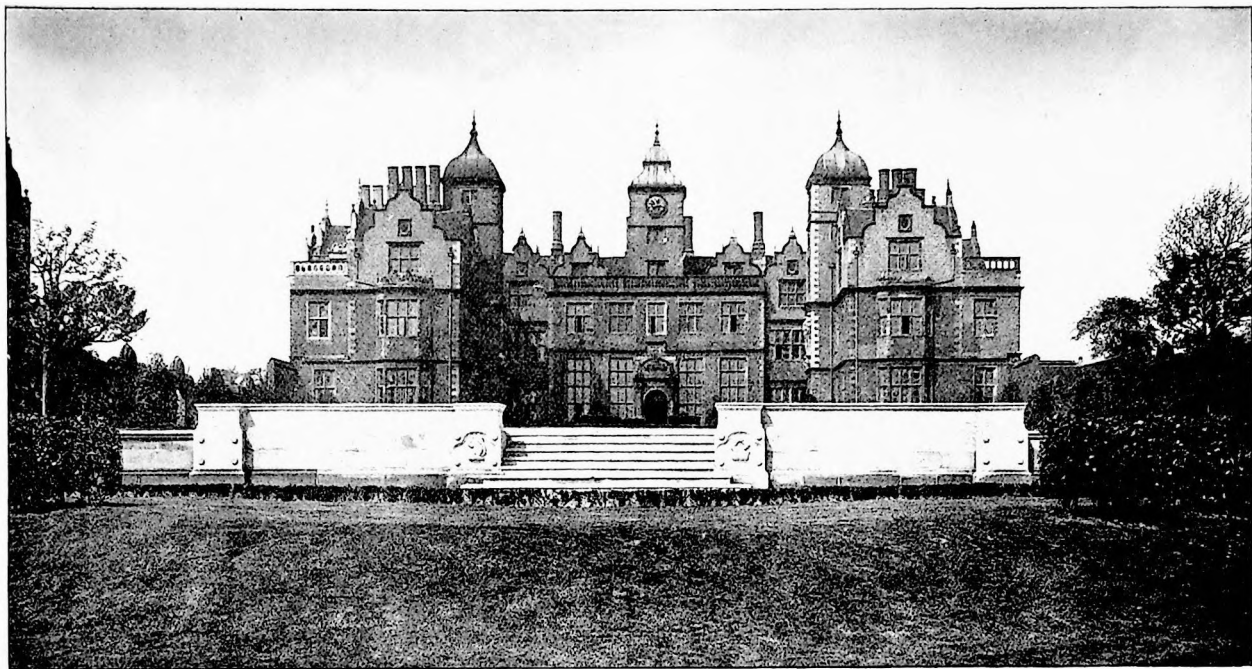
The park is forty-nine acres in extent, and the whole has recently undergone a scheme of re-organization prepared by the Birmingham Civic Society that brings the design and lay-out of the grounds into conformity with the period of the hall.

Calthorpe Park.

Calthorpe Park (thirty-one acres) was acquired from Lord Calthorpe in 1857. It was held on lease up to 1894, when the Corporation obtained the fee simple, the only condition attached to the transfer being that the Corporation should use the land for the purposes of the Recreation Grounds Act only.

Cannon Hill Fields.

In 1873, by the generosity of Miss Louisa Ann Ryland—a representative of an old Birmingham family, who had generously contributed towards the purchase of Aston Park—the estate then known as Cannon Hill Fields at Moseley was presented to the town. It was converted into



Photograph—Ernest H. Fletcher, Mosely, Birmingham

ASTON HALL.

a beautiful park, and opened to the public in September, 1873. The donor declined to allow it to be named after her as the Town Council had proposed, and at her desire it was opened without public ceremony.

An extension was effected in 1897 through the liberality of Sir John Holder, Bart., who gave seven acres of land, and by a gift from Lord Calthorpe of another seven acres on the condition that the Corporation undertook the straightening of the course of the River Rea. This latter area includes the "Queen's Ride," which was constructed with the intention that it should form a local "Rotten Row."

Cannon Hill Park is now the principal ornamental park of the City. It includes a garden specially constructed for the use of students in botany, the gift of an anonymous donor. A further extension was made in 1907 by the addition of the large house and grounds, with an area of 2 acres 1 rood 22 poles, near the Russell Road entrance. This was purchased from the Trustees of the late Miss Ryland, and another plot in Russell Road of half an acre was purchased in 1910, and is used as a nursery garden.

The park is now seventy-three acres, and contains the old timbered house, which originally stood in Deritend not far from St. John's Church, known as "The Golden Lion Tavern." Through the efforts of the Birmingham Archaeological Society, this interesting old house, which may have been the Deritend home of the Guild of St. John the Baptist in the fifteenth century, was carefully removed and re-erected in the Park.

Highgate and Summerfield Parks.

In 1875 the Council purchased from the Trustees of Holliers Charity a fine open space extending from Alcester Street to Moseley Road. This land afforded a fine prospect of Birmingham from the north, south, east, or west end, and it was from this neighbourhood that some of the early views of the town were obtained. It was laid out as a public park under the name of "Highgate Park," and opened by Mr. Joseph Chamberlain in 1876. It was the first open space to be entirely purchased by the Corporation, and was shortly followed by another purchase—Summerfield Park, at that time a little over twelve acres—costing £9,000. The site was well wooded and park-like in character, and required no immediate expense in laying out, and it was opened eight weeks after Highgate Park. Summerfield Park now covers thirty-four acres.

A Memorable Year.

Four days before the Council authorized the purchase of the first portion of Summerfield Park, and on the same day that Mr. Joseph Chamberlain, as Mayor of the Borough, opened Highgate Park, another noble gift was announced from Miss Ryland, forty-three and a half acres of land at Small Heath for a park. This was chiefly agricultural land, and Miss Ryland undertook to contribute £4,000 towards laying out the ground. A portion of the land near the corner of Coventry Road and Tennyson Road eventually became a well-wooded grove. An open-air swimming pool was formed, also a boating pool.

Later on, with a view to preventing the encroachment of brick and mortar on its boundaries, a strip of land on two sides was purchased, and the owner expressed his willingness to give four acres of the land adjoining for a roadway fifty feet wide and bordering the park on the undertaking of the Corporation to bear one-half the cost of the construction of the road. The improvement cost £3,050, towards which sum Miss Ryland generously contributed £2,000.



Photograph—Ernest H. Fletcher, Moseley, Birmingham.

ROSE HILL, THE LICKEYS.

This park was opened by Queen Victoria in 1879, hence the name "Victoria Park."

Conversion of Churchyards and Burial Grounds into Public Gardens.

In 1878, under the Birmingham Closed Burial Grounds Act, the Corporation obtained possession of the burial ground in Park Street (which formerly belonged to St. Martin's Church), and the adjoining graveyard of St. Bartholomew's, and laid them out as public gardens. They also acquired the churchyards of St. Martin's, St. Mary's, St. Paul's, St. George's, St. Philip's, St. Gabriel's, and St. Thomas'. The conversion of St. Philip's Churchyard into a public garden was a most important improvement to the amenities of the centre of the City.

Central Playgrounds.

A new departure was the provision of recreation or playgrounds within the built-up areas of the town. The first of this class to be acquired was the Burbury Street Recreation Ground of about four and a half acres, which was opened in 1877. The site was originally a clay-pit, and was the gift of the late Mr. William Middlemore. The Walmer Recreation Ground of two and a half acres was next acquired. It formed part of a large area known as "The Old Pleck," lying between Aston Road and Newtown Row. It was known in earlier times as "The Wallmoor," part of the lands which had belonged to the Guild of the Holy Cross, and afterwards to the Free Grammar School. It was opened in 1892.

The Lickeys.

In 1889 steps were taken to preserve one of the finest playgrounds and breathing spaces in the Midlands for the people of Birmingham—the range of hills within easy distance of the town known as the Lickey Hills.



Photograph—Ernest H. Fletcher, Moseley, Birmingham.

COFTON WOODS, THE LICKEYS.

A number of building plots having been sold on the lower slopes of Rednal Hill, the Birmingham Association for the Preservation of Open Spaces persuaded the purchasers, with two exceptions, to surrender their bargains, and also purchased the remaining upper portion. As a result of the generosity of the Association and certain individuals Rednal Hill, containing thirty-two and a half acres, and Bilberry Hill, containing forty-nine and a half acres, were ultimately handed over to the Corporation, the latter on a lease for twenty-one years at a nominal rent of £5 a year. A portion of Beacon Hill, containing nearly thirty-two acres, was also presented to the Corporation by Messrs. Edward, George junr., and Harry T. Cadbury in 1906, and Bilberry Hill was purchased by the Corporation from Lord Plymouth in 1913. The most important of these acquisitions was, of course, that of Beacon Hill, which has a height of 998 feet above sea level, and embraces, it is said, a view of ten or more counties.

The total area of the Lickeys under the control of the Parks Committee, which embraces the charming Cofton Woods, is now about 475 acres and includes an eighteen-hole municipal golf course, the first nine holes of which were opened for play on July 12th, 1921, and the remaining nine holes on July 20th, 1922.

More Parks.

From 1890 onwards the Corporation pursued a fairly active policy in regard to the acquiring of parks and open spaces, and were assisted in this by generous gifts from, and propaganda initiated by, prominent citizens. Mr. J. S. Nettlefold and several kindred spirits founded an association with the object of securing playing grounds in the crowded central areas, and it was largely due to Mr. Nettlefold's strenuous work for central open spaces that Callowfields Park, the large open space at the corner of Watery Lane and Garrison Lane, was acquired and laid out on the site of demolished slum property, and equipped for gymnastics and open-air games.



Photograph—Ernest H. Fletcher, Moseley, Birmingham.

PYPE HAYES PARK.



Photograph—Ernest H. Fletcher, Moseley, Birmingham.

YARDLEY RECREATION GROUND.

By the public-spirited efforts of Mr. A. M. Chance and other citizens, who raised by public subscription the major portion of the purchase price of Lightwoods Park and Warley Woods, these two parks also came into the possession of the Corporation, and at the latter a nine-hole golf course was constructed and opened to the public in 1921—the first municipal golf course to be provided by the City.

By the extension of the City in 1911 a number of parks and open spaces came within the City area, the chief amongst which is the beautiful park at Handsworth, but it is impracticable to give in detail in this little book the history attaching to the many parks and open spaces acquired by the Corporation in pursuance of the policy above indicated. However, a schedule is attached which sets these out, with the areas which make up the total figure given in the first paragraph of this chapter.

Playing Fields.

In recent years the committee have given particular consideration to the provision of open spaces for playing fields, the chief acquisitions being Castle Bromwich Playing Fields (seventy-five acres leased from the Drainage Board), and the Billesley Common Playing Fields, purchased by the Corporation in 1919 and comprising 200 acres. These playing fields are devoted almost solely to cricket and football. The committee have also acquired the sites of the two municipal golf courses at Church Farm (Harborne) and Cock's Moors Woods (Alcester Lanes End). Under various town planning schemes a further 1,150 acres will ultimately come under the control of the committee for open spaces and recreation grounds.

Accommodation is provided for games in the parks as follows :

Football pitches	... 132	Tennis courts (grass)	... 349
Hockey ...	... 12	„ „ (hard)	... 52
Cricket ...	... 127	Bowling greens (crown)	... 28
		„ „ (flat)	... 8

Music. Boating. Staff.

During the summer months music is provided in many of the parks, bands being engaged to play throughout the season; also a series of concerts and *al fresco* dancing. Boating is provided at moderate charges.

The Parks Department comprises a staff of about 620, with a salary and wages bill of £1,650 weekly, and the net cost of the maintenance of parks, recreation grounds, and open spaces is equivalent to a rate of 4d. in the £.

PARKS AND RECREATION GROUNDS.

Name.	PARKS.			Situation.	Approx. Area.
					Acres.
Adderley	Adderley Road, Saltley	...	11
Aston	Trinity Road ...	...	49
Balsall Heath	Taunton Road	...	4
Bournville	Linden Road ...	...	7
Brookvale	George Road, Erdington	...	32
Calthorpe	Pershore Road	...	31
Cannon Hill	Edgbaston Road	...	73
Cotteridge	Franklin Road, King's Norton	...	22
Daffodil	Tessal Lane, Northfield	...	9
Digby	Mansel Road, Small Heath ...	...	6
" Farm "	Sampson Road, Sparkbrook	...	9
Handsworth	Church Hill	...	63
Henbury's, Uffculme, and Highbury	Moor Green ...	...	73
Highgate	Moseley Road	...	8
King's Heath	Vicarage Road	...	30
Lightwoods	Beech Lanes, Bearwood	...	30
Muntz	Umberslade Road, Selly Park	...	5
Perry	Church Road, Perry Barr	...	100
Pype Hayes	Chester Road, Erdington	...	76
Queen's	Harborne	...	14
Rookery	Kingsbury Road, Erdington	...	17
Salford	Lichfield Road	...	43
Selly Oak	Gibbins Road ...	...	31
Selly Park	Selly Avenue ...	...	20
Short Heath	Court Lane, Erdington	...	13
Sparkhill	Stratford Road	...	19
Summerfield	Dudley Road, Rotton Park	...	34
Swanshurst	Swanshurst Lane	...	39
Witton Lakes	Gipsy Lane, Erdington	...	61
Victoria	Coventry Road	...	43
Ward End	Washwood Heath Road	...	54
Warley	Bearwood	...	111
RECREATION GROUNDS.					
Acock's Green	Fox Hollies Road	...	6
Batchelor's Farm	Belcher's Lane	...	22
Barr Beacon	Great Barr	...	148
Billesley Common	King's Heath ...	...	204
Black Patch	Perrott Street, Soho	...	17
Bleak Hill	Erdington	...	26
Bordesley Green	Saltley ...	...	2½
Bournbrook	George Road ...	...	2

		RECREATION GROUNDS— <i>Continued.</i>				Approx. Area.
Name.		Situation.				Acres.
Brookfields	George Street West	...	...	1
Burbury Street	Burbury Street	...	...	4
Castle Bromwich	Chester Road	...	...	100
Chamberlain Gardens	Ladywood Road	...	...	4 $\frac{3}{4}$
Cock's Moors Woods	King's Heath	...	...	77
Communication Row	Ladywood	...	...	1 $\frac{1}{2}$
Coventry Street	Coventry Street	...	...	1 $\frac{1}{2}$
Dad's Lane Farm	King's Heath	...	...	13 $\frac{1}{2}$
Eliot Street	Nechells	...	...	1
Garrison Lane	Garrison Lane	...	...	5
Grange Road	Small Heath	...	...	1 $\frac{1}{4}$
Greet	Reddings Lane	...	...	9
Harborne Golf Course	Vicarage Road, Harborne	...	...	29 $\frac{1}{2}$
Hazelwell	Stirchley	...	...	11
Heybarnes Farm	Hay Mills	...	...	33 $\frac{1}{2}$
Hodge Hill Common	Castle Bromwich	...	...	23
Keeley Street Site	St. Bartholomew's	...	...	8 $\frac{1}{4}$
King's Norton	Pershore Road	...	...	25
Land	Adjoining River Cole, Yardley Wood	...	...	10 $\frac{1}{2}$
Land	Yardley and Richmond Roads, Stechford	...	...	14
Lawford Street	Duddeston	...	...	2
Lickey Hills	47 $\frac{1}{2}$
Manor Road Site	Stechford	...	...	23
Marlborough House Estate	Yardley	...	...	13 $\frac{1}{2}$
Morden Road	Stechford	...	...	5
Mount Street	Nechells	...	...	5 $\frac{1}{2}$
Musgrave Road	Winson Green	...	...	2
Oaklands Estate	Yardley	...	...	36
Park Street Gardens	St. Bartholomew's	...	...	4
Pebble Mill Fields	Pershore Road, Selly Park	...	...	5
Pineapple Estate	Allens Croft Road, King's Heath	...	...	3
Quinton	Meadow Lane	...	...	1 $\frac{1}{2}$
Quinton Nurseries	Ridgacre Lane	...	...	14 $\frac{1}{2}$
Red Hill	Yardley	...	...	4
Sandy Lane	Bordesley	...	...	1 $\frac{1}{2}$
Sare Hole Road	Sparkhill	...	...	2
Sheepcote Street	Ladywood	...	...	1 $\frac{1}{2}$
Staple Hall Farm	Northfield	...	...	90 $\frac{1}{2}$
Stechford	Yardley Fields Road	...	...	4
Stirchley	Hazelwell Street	...	...	1 $\frac{3}{4}$
St. Margaret's Road	Ward End	...	...	8 $\frac{1}{2}$
Trittiford Mill	Yardley Wood	...	...	17
Tower Street	Tower Street	...	...	1
Victoria Common	Bristol Road, Northfield	...	...	9 $\frac{1}{2}$
Walmer	Elkington Street	...	...	2 $\frac{1}{2}$
Yardley	Church Road	...	...	16 $\frac{1}{2}$

						Acres.
Total area of	32	Public Parks	...	...	...	1,137
"	"	54 Recreation Grounds	...	...	...	1,544 $\frac{1}{4}$
"	"	19 Open Spaces	...	...	...	16 $\frac{1}{2}$
Total						2,697 $\frac{3}{4}$

Chapter XVII.

THE CITY CEMETERIES.

THE cemeteries belonging to the Corporation are under the control of the Parks Committee. The list of cemeteries and number of interments is as follows :

Name, Area, and Situation.	Interments.	
	Since opening.	Year ended 31-3-27.
Brandwood End (54 acres), Woodthorpe Road, King's Heath	20,008	1,128
Handsworth (69 acres), Camp Lane, Handsworth	11,952	1,008
Lodge Hill (72 acres), Weoley Park Road, Selly Oak	31,521	1,262
Quinton (46 acres), Halesowen Road, Quinton ...	143	68
Witton (102 acres), Moor Lane, Witton	328,738	3,086
Yardley (61 acres), Yardley Road, South Yardley ...	66,946	2,257

The areas given include additions made from time to time for extension.

The first to be acquired was Witton Cemetery, which was opened in 1863. This remained the only cemetery under the control of the Corporation until the extension of the City in 1911, when Brandwood End and Lodge Hill were taken over from the King's Norton Urban District Council, Yardley Cemetery from the Yardley District Council, and Handsworth Cemetery from the Handsworth District Council. The site at Quinton was purchased some years ago, and was opened for burials in 1923.

In each cemetery portions are set apart for Church of England, Non-conformist, and Roman Catholic burials, and each portion is divided into sections, the fees for burial in which vary according to situation.

The annual receipts from City cemeteries is about £27,000.

Chapter XVIII.

THE PUBLIC LIBRARIES.

BIRMINGHAM Public Libraries have played a considerable part in the cultural and educational development of the City. Birmingham admits no peer among the rate-aided libraries of the kingdom—it does not claim to possess the biggest, best, and most expensive library system in the country, but it does claim that its collection is the best scale model of the perfect library.

The first Public Libraries Act (1850) enabled authorities to levy a halfpenny rate (increased to a penny by an Act in 1855) for the adaptation or erection of suitable buildings and to meet charges for management and maintenance. The purchase of books, however, was not included in the provisions. Birmingham did not at first take kindly to the new idea, and it was not until the example of other towns had stirred the City's pride, and so enabled the Council to proceed with the adoption of the Act, that a Free Libraries Committee was constituted, consisting of eight Council and eight non-Council members. The committee speedily got to work, and presented a comprehensive report to the Council.

The City's First Public Library and News Rooms.

This report was approved by the Council in May, 1860, and the committee immediately proceeded to carry into effect the recommendations

they had put forward. The scheme provided for a Central Reference Library, with Reading and News Rooms, and four District Libraries with News Rooms. The town was divided into Northern, Southern, Eastern, and Central and Western Districts for this purpose, and in less than twelve months the first district library was opened in Constitution Hill. The grant of the lease of Adderley Park to the Council, together with premises suitable for use as a library and museum, enabled the committee to open a branch library there early in 1864.

Birmingham still awaited the erection of central Reference and Lending Libraries, however, and the committee proceeded next to consider the possibilities of erecting a

Central Reference and Lending Library.

Land was then obtained and work commenced on the erection of central reference and lending libraries in 1862, and three years afterwards the Central Lending Library, which included an embryo of the Art Gallery, was completed, the opening coinciding with the visit of the British Association in 1865. The Reference Library was opened in 1866, also the Deritend branch, and the foundation-stone laid of the Gosta Green Library, which, when completed, fulfilled the entire original scheme of the Public Libraries Committee.

Limit of Expenditure Removed.

The committee were sorely tried by the limits the 1855 Act imposed upon them. The penny rate only produced about £4,500, and, after loan charges had been met, only £2,500 remained for the maintenance of six libraries and an Art Gallery, and when these demands had been met £125 only was left for additional books and renovations. This state of affairs continued until 1883, when the Birmingham Corporation (Consolidation) Act removed the limit. The rate for libraries prior to the war seldom exceeded three-halfpence in the pound, so any fears that the committee would embark upon a career of reckless expenditure in consequence proved unfounded.

The Shakespeare and Staunton Collections.

In 1864 the nucleus of the famous Shakespeare Collection was added to the Reference Library. On the tercentenary of Shakespeare's birth the Mayor of Birmingham received on behalf of the town a large collection of Shakespeare's works and Shakespeariana, also a sum of £450 for the purchase of further additions to the library. A room was made available for the reception of the collection, which now consisted of 1,239 volumes and the Shakespeare Memorial Library was opened in April, 1868. In ten years the collection increased to 7,000 volumes. To-day the Shakespeare Collection is the largest in the world, containing 19,500 volumes in forty languages, together with a collection of portraits of Shakespeare and illustrations incidental to the life and work of the poet.

In 1875 the unique Staunton collection of documents and books upon the antiquities and history of Warwickshire was purchased. Of the whole collection only the illuminated Knowle Register for the years 1451-1535 and a few other volumes survived the great fire at the Central Library of 1879, and these afterwards became the first volumes in the new Reference Library.

40,000 Works of Reference Destroyed by Fire.

The growth of the libraries had been continuous, and by 1878 it had become necessary to extend the central premises. Work on the extension was proceeding when the fire broke out which destroyed the greater part of the contents and reduced the building to ruins. Of the collections in the Reference Library only about 1,000 books were saved of the 50,000 that had filled its shelves.

The fire destroyed the Library on a Saturday. The following Monday morning the Public Libraries Committee met and appointed a sub-committee to consider, in conference with architects, plans for a new building, and arranged for a public meeting of citizens to be held with a view to obtaining contributions towards the restoration of the library. A fund for new books, which ultimately reached £15,197, was initiated; £25,000 was received from insurance companies, and the committee were enabled to proceed with their plans unhampered by lack of funds. Restoration was commenced immediately, and the new Reference and Lending Libraries were completed and opened in June, 1882, amid scenes of great enthusiasm.

Branch Libraries, News Rooms, and Juveniles.

Additional branch libraries had been erected and equipped as opportunities arose, and by 1896 Bloomsbury, Harborne, Spring Hill, Small Heath, and Balsall Heath possessed branch libraries, while the libraries at Adderley Park, Deritend, and Gosta Green had been enlarged to meet the increased needs of those districts.

To-day each library is equipped with a News Room, which contains a representative selection of the English newspaper world and, in the case of the central and larger branch libraries, foreign and colonial newspapers and other periodicals. The deletion of betting news from newspapers discourages some unwelcome visitors, but every facility is offered to searchers for work, and to facilitate their quest the "situations vacant" columns of newspapers are posted in prominent positions.

The requirements of the juvenile reader are met by the provision of separate juvenile reading rooms, and considerable trouble is taken to obtain and hold the interest of school children in the libraries and their collections. To enable full advantage to be derived from the libraries the Chief Officer of the Education Department is authorized to replace any book lost by scholars or by members of the clubs organized by the after-care department. Parties of school children are conducted over the libraries as circumstances permit, and the rooms opened at the Balsall Heath, Bloomsbury, Erdington, Harborne, Selly Oak, Small Heath, Sparkhill, Spring Hill, and Stirchley Libraries are a source of continual pleasure to school children.

Contrasts 1861-1927—and Open-Access System.

In 1861-1862 the total issue of books from all libraries was 108,057, while during the year ended March 31st, 1927, the total issue was 3,247,845, which number is itself an advance of 363,478 over the previous year's record. During 1927 no decrease is recorded at any of the libraries, while the increases vary from eleven per day at the Deritend Library (which is still a "closed" system library) to 271 per day at the Aston Library, where the open-access system has been installed. In 1861-1862 the total number of books upon the shelves of the libraries throughout the City was 6,288, while in the year ended March 31st, 1927, the complete stock had reached a total of 596,072. It would need a shelf over fourteen miles long to accommodate them. To facilitate the speedy transit of books from

branches to the City, or from the central libraries to the suburban ones, telephones have been installed at each library, and eventually the committee hope to provide a delivery van to expedite transfers.

Introduction of the open-access system is proceeding, and in every instance where it has been installed considerable increases have been remarked. Under the new order the books are closely classified and can be examined by readers, while attention is directed to books that were neglected under the closed system, and the resources of the libraries are thrown open to the public in a manner that was impossible under the old conditions.

Boulton and Watt Collection.

It is fitting that in the City famed for their activities some memorial should exist to the work of Boulton, Watt, and Murdoch, who were the pioneers in the industrial revolution of the eighteenth century. The Boulton and Watt Collection was presented to the City by Mr. George Tangey, J.P. To this collection were added many personal and other interesting objects which had been under the care of the Museum and Art Gallery Committee, and the combined collection was opened in 1911. In 1916 further suitable accommodation for the relics was provided in the Central Library. The exhibit is of unique interest, especially to engineers, and contains the inventors' models and drawings of the machinery which did so much to effect the industrial revolution.

Technical and Commercial.

The Technical and Commercial Libraries in the City are indications of Birmingham's progressive policy. Included in the Commercial Library is a Patents Library that is believed to be, except for the National Patents Library, the finest in the Kingdom. It has the distinction of being older than the Reference Library, for in 1855, five years before the Public Libraries Act was adopted, Birmingham already had two hundred volumes of patents specifications, and indexes, and these formed the nucleus of the present Commercial Library in the Council House extension, which has proved of immeasurable value to the business men of Birmingham. It is classified upon the Dewey decimal system, the merit of which is that books upon similar subjects are placed together, and at present 130 directories and all the principal telegraph codes, Parliamentary papers, atlases, trade catalogues, time tables, standard reference books, and trade periodicals find their place upon its shelves.

The Technical Library is an obvious corollary to the Commercial Library, and an efficient section was opened in the Central Library in 1924.

Lantern Slides and Illustrations.

Very popular during the winter months is the Lantern Slides Collection, comprising over 13,500 slides for loan. Subjects from witchcraft and demonology to the Pilgrim Fathers are available. These are also arranged according to the Dewey decimal classification, and manuscript catalogues describe individual slides.

The Collection of Illustrations is assuming vast proportions and now contains 20,000 items, and there is a collection of music comprising over 12,000 volumes, 2,000 at the central premises and the remainder at the branches. Developments are taking place in the latter section, and a representative collection of chamber music is being formed which will eventually be not unworthy to rank with the other series in the libraries.

The Photostat Innovation.

The Birmingham Public Libraries were the first in the country to instal a photostat, by which photographic facsimiles of documents, drawings, graphs, tables, maps, prints, and other matters can be expeditiously and economically produced, and it is anticipated that the innovation will be found of considerable assistance to research and other students.

From small beginnings the Birmingham Public Libraries have grown almost beyond recognition. Over thirty years ago Thomas Greenwood, in his "Public Libraries," writes : "To any one unacquainted with the public libraries of the country a visit to the Birmingham Public Libraries is a liberal education . . . Their ever-extending work is the best of all possible proofs of the utility of the libraries." To-day the City has a library system that is among the best in the kingdom, and one that maintains the proud reputation earlier generations have bequeathed.

Chapter XIX.

THE POLICE FORCE.

THE existing system of police administration is of comparatively modern origin, and is a development of the principle upon which the force was established by Sir Robert Peel. Before the days of the first "Bobby" the responsibility for maintenance of the peace was imposed upon each hundred or tithing, and members of those divisions were held jointly liable for infractions of the law which took place within their limits.

In the year 1789 a Mr. Thomas Lee, Steward of the Manor of Birmingham, prepared a list of the duties of "the respective officers appointed by the Court Leet in the Manor," and among the entries we find :

"THE OFFICE OF CONSTABLE.

The Jury find and present, that these Officers are annually elected by the Jury ; and their Duty is to suppress all Riots and Affrays within the Manor, to arrest all Felons, Night Walkers and suspicious Persons, which they may do of their own Authority : and they may charge and command any Person, to assist them in the Execution of their Office, if needs require, and they are to be attendant upon the Justices of the Peace, and to execute their Warrants : and they have a power, by virtue of their Office, of Billetting the Officers and Soldiers, which they are to do fairly and impartially."

"THE OFFICE OF HEADBOROUGH.

The Jury find and present, that this Officer is annually elected by the Jury, and is a Secondary Constable, and in the Absence or on the Death of the Constable, it is his Business to do and execute the Duties of the Constable, and when required, he is personally to assist the Constable in preserving the Public Peace."

A Few Watchmen for Night Duty.

Before the grant of the Charter of Incorporation in 1838 the police of the town was administered by the Commissioners of the Street Act and by the County Justices of the other parishes afterwards included in the borough. There was no regular police force, only a few watchmen appointed for night duty, and the ordinary arrest of criminals was left to the

parish constables. A sum of money for the establishment of a police force was included in the first estimates of the Council, but no steps were taken to appoint constables.

The political agitation which culminated in the Chartist meetings of 1839 caused an application to be made for a detachment of London police to assist in Birmingham. Lack of money prevented steps being taken immediately by the Council to establish a force, as they did not deem it prudent to proceed with the matter until they were actually in possession of sufficient funds.

Birmingham Police Bill in Parliament.

On July 15th, 1839, the Bull Ring Riots occurred, and on the two following days discussions took place in both Houses of Parliament. In the Lords the debate was particularly heated, and the Duke of Wellington repeatedly declared that "he had been in many towns taken by storm, but never had such outrages occurred in them as had been committed in Birmingham." He further suggested that the riots were the direct consequence of granting a charter of incorporation. The Government, however, were sympathetic towards the Birmingham Magistrates and Council, and at the request of the Mayor introduced the Birmingham Police Bill, which provided that a sum of £10,000 should be advanced, the money to be repaid out of a special rate within ten years.

A number of people in Birmingham who objected to representative local government communicated with Sir Robert Peel, the leader of the Opposition in the House of Commons, urging that in the Bill the control of the police should be vested in a commissioner appointed by the Home Secretary, and so deprive the Council of some of its most important work. The proposal was accepted, and a Police Commissioner was appointed, to whom the Government advanced the sum of £10,000 for the establishment of a police force, which sum was to be repaid, together with interest, by the Town Council. In 1842 the Charters Confirmation Act legalized Birmingham's Charter of Incorporation, and the control of the police was restored to the Council.

A Government official in 1849 reported that "there are eight distinct and separate governing powers within the Parliamentary borough of Birmingham, and consequently eight separate sets of officers have to be found to do the work which may be done by one efficient staff." The Improvement Act of 1851 converted these eight bodies into one, and (as Mr. J. Thackray Bunce said in his official "History of the Corporation of Birmingham") "after thirteen years of almost incessant conflict the triumph of the representative principle was finally and firmly achieved."

In Our Own Times.

The authorized strength of the regular police force in the City is 1,587. When the present Chief Constable came to Birmingham in 1899 the force comprised 700 members. There were only fourteen police stations, while to-day there are over forty. A great change has also taken place in educational and ambulance instruction and in the social aspects of the force.

Recruits are put through a course of instruction in law, practical patrol duties, etc., by police instructors, and they attend special Council school continuation classes for supplementary instruction in literary subjects. Ambulance work, drill, fire drill, and gymnastics are also included in the curriculum. No fewer than 1,408 members of the force are qualified to render "first aid," and of this number 1,310 men hold the second certificate

and 1,220 the third certificate and medallion of the St. John Ambulance Association.

The first women police in the City, two in number, commenced duty in June, 1917. There are now six members of this section, and, while it is their duty to help all females in trouble, their work particularly lies among girls who can be removed from evil influences. The Hostel for Women and Girls in Dale End, believed to be the first institution of the kind in the country, was opened in June, 1918, and the matron is ready at any time to receive a girl or young woman temporarily and to give advice and help.

The Special Constabulary Reserve was formed in October, 1919, after the disbandment of the Special Constabulary of the war period, and is now a permanent force under the Special Constables Act of 1923. The strength of the force is at present 863, but during the industrial upheaval of 1926 this number was temporarily increased to 4,298.

Traffic Control. Police Aid to Charities.

The attention of the Watch Committee has been directed to the increasing number of fatal street accidents. The help of the Public Works Department has been enlisted to provide means of safety, and many street refuges have been erected to reduce the hazards of navigating dangerous crossings. Steps have also been taken to bring tramcars to the footpath at suitable places to avoid traffic danger.

An activity of the force which deserves more credit than it receives is the work of the Police Aided Association, founded in 1893 to supply boots and warm garments to the poorest children of the City. Since its inception over 51,000 children have been benefited, and nearly £44,000 has been disbursed. The proceeds of the annual police sports are also distributed among the charities of the City, this amounting to about £13,000 during the past twenty-six years.

Such is the story of the Birmingham Police Force since the days of the Constable and Headborough, and now it well maintains its reputation for being the finest police force in the world. The old bogey of bygone years—the threat to report errant children to the “bobby”—has lost its significance, for nowadays children look upon the modern policeman as the guardian angel of road-crossings, and the adult citizen is less unfriendly with increasing knowledge of the policeman’s responsibilities and worth.

Chapter XX.

FIRE PROTECTION.

In sixteen stations of the Fire Brigade the City’s fire-fighters carry on an unrelaxing vigil. At the sound of the alarm bell a station is instinctively in action, and in thirty seconds the engine, with crew and equipment complete, is ready for service and away. If necessary, the alarm is passed on to the other fifteen stations, who stand by for instructions.

In the leisurely days of the past the duties of a fire brigade sub-committee were performed by the churchwardens, and in 1695 that body appointed a William Burn to keep the fire engine in order and “to play it four times every year,” for which service he received twenty shillings per annum. After the engine had been thus played twenty times, that is to say in the year 1701, a new one was secured at a cost of £12.

Mr. Peck (the Beadle) versus Mr. Breeze.

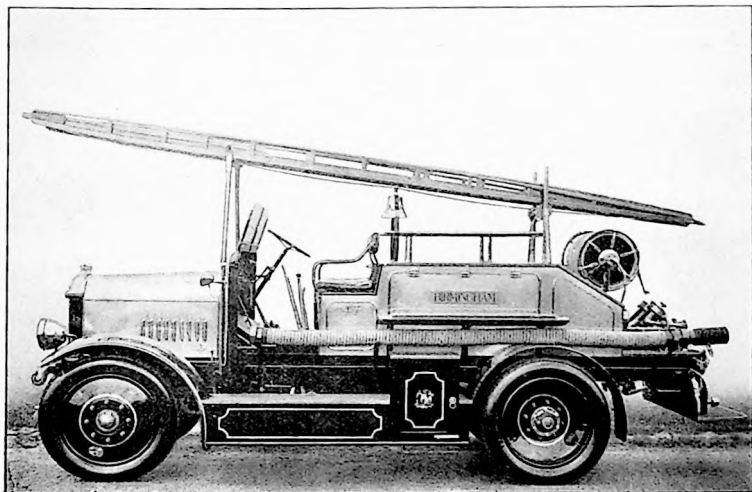
The Fire Brigade Authority again enters the lists in the year 1777, when an action at law was entered against Mr. Peck, the Beadle, by Mr. Breeze, who, it seems, sustained a damping when the engine was being played. The churchwardens appear to have rallied round their chief officer, and instructed that the action be defended at the town's expense, but there is no evidence to show whether the Beadle or Mr. Breeze was successful, and the record of a trial which might have rivalled in interest the classic "Bardell v. Pickwick" is lost to posterity.

In the years 1788-89 the churchwardens leased a workshop in Temple Street and had it fitted up as an engine house, the advice of Messrs. Boulton and Watt, of the famous Soho Foundry, being sought upon the type of engine most suited to the needs of the place. Whether their choice was a success remains unknown, for the history of the churchwardens' venture becomes somewhat obscure after that date.

Impressive Insurance Company Fire Fighters.

Four years afterwards, in 1792, the Royal Exchange Assurance Company presented to the authorities a fire engine, which was housed in Congreve Street. The Birmingham Fire Office followed the example with a fire engine house in Union Street, and the Norwich Union Insurance Company with a fire engine house in Congreve Street.

The museum at the Central Fire Station in the Upper Priory contains replicas of certain of the uniforms of these early firemen, which suggest an excellent idea of the impressive event a local fire must have been. The uniform of the Norwich Union Company, for example, is described as "green and red, with a kind of red epaulette, silver buttons, low-crowned hat, and jack boots." Plush breeches and white stockings also formed part of this distinctive outfit. In 1863 the Royal Insurance Company



MOTOR TURBINE PUMP.

engaged the services of some thirty members of the Birmingham Rifle Volunteers to form their brigade.

Fire plates, many of which may still be seen upon the older houses in the City, denoted to the attending firemen with which company the building was insured.

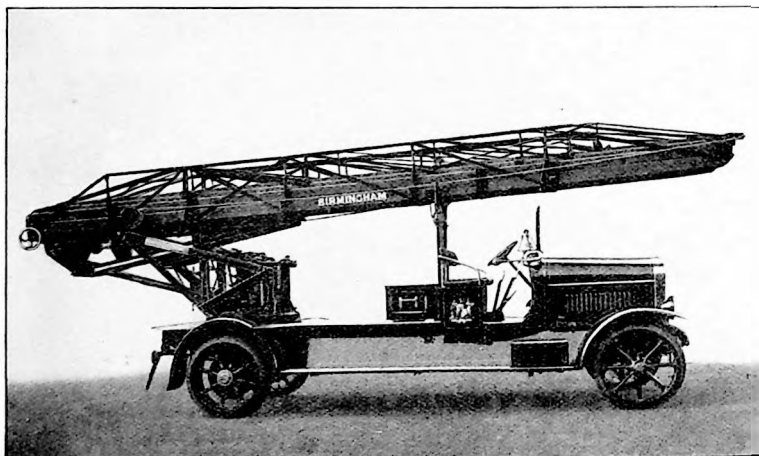
Progress after Private Brigades Disbandment.

In 1873, however, the insurance companies decided to disband their private brigades and to present to the town their entire plant, which was then valued at £1,000. The town thus became possessed of a "force" equipped with five engines, built between 1840 and 1864, sixteen lengths of hose, thirteen sets of uniform, together with certain small sundries, and accommodated its acquisition in Lower Cannon Street.

During the last half century this service has closely followed the expansion of the City, as the following comparative table illustrates :

	In 1886.	In 1927.
Acreage of City	8,420	43,601
Population	394,000	961,222
Fire Engines	7	46
Fire Calls	120	1,494
Officers and Men	17	219

The change in the status of the fireman is no less marked. When Mr. William Burn had played the fire engine the requisite number of times his professional liabilities were at an end. The modern fireman needs to add to that accomplishment more than an elementary knowledge of general engineering and building construction, together with the rudiments of hydraulics, chemistry, and electricity. His physical condition must, of course, be beyond question, and he must be prepared to subject himself to a strict discipline. He is responsible for public safety in places of entertainment, and constant inspections are made to secure this.



TURNTABLE FIRE ESCAPE AND WATER TOWER.

Equipment and Administration.

Before the motor engine superseded the horse engine the City fire stations had forty-two horses in their stables. In 1928 the brigade has forty-nine motors in its service, which includes pumps capable of discharging 600 gallons of water a minute, escapes which in forty seconds can be extended to eighty-five feet and made to operate at any angle, tenders to convey escapes and ladders, and machines of every type known to the modern fire-fighter.

The Brigade Rescue Detachment is specially trained for work in poisonous fumes and gases, and the machine detailed for the work is equipped with oxygen breathing apparatus, a blower for displacing poisonous fumes from basements, together with electrical searchlights. Its equipment also includes apparatus for resuscitating the victims of poisoning by fumes and gases.

For the purposes of administration the City is divided into six areas, each of which has its own station and sub-stations. Each of the sub-stations is connected by private telephone line to its district station, which, in turn, is similarly connected with headquarters.

The street fire alarms are allocated throughout the City according to the fire risks of each particular district. If a call is made from a street alarm a contingent from the nearest station attends, and detailed information is communicated to the district station and thence to headquarters; if necessary, further contingents are despatched forthwith. Information as to fire risks and water supplies is communicated to the operating brigade from headquarters, and when a station's personnel and engines are depleted by attendance at a fire, contingents from other districts are sent to replace them.

Some Unofficial Duties.

From the 1695 engine that William Burn was appointed to play "four times every year" to the £2,000 or £3,000 engines ready for instant action is the story of the progress of Birmingham's Fire Brigade.

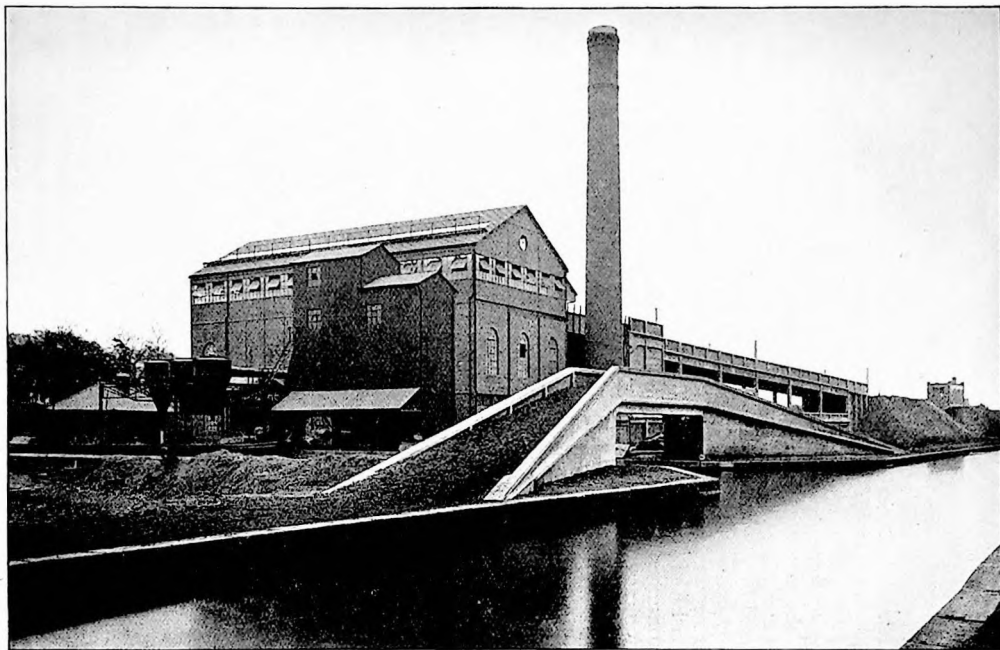
It has unofficial duties, however. Among calls for its services other than fire extinction are those for rescuing cats from dangerous positions, removing dangerous flagpoles or affixing new halvards, painting flagpoles which are difficult of access, and for removing birds' nests which have been constructed more with a view to feathered comfort than human convenience. Even calls for the recovery of strayed hats from basement areas are not unknown.

Chapter XXI.

SALVAGE.

THE Salvage Department is responsible for the removal and disposal of house refuse, the collection and disposal of certain trade refuse, the cleansing of markets and slaughterhouses, and the emptying of cesspools.

In 1851 the Corporation obtained increased sanitary powers, and one of its new duties was to arrange for the collection of night-soil and house refuse. At that time it was practically a "midden" town, and the refuse was disposed of partly to local farmers for manure, the remainder being carried away to tips. The work was carried out by contractors, who were paid a small sum as subsidy, their profit being made out of the sale of manure. This method proved unsatisfactory, and in 1853 the Town Council decided to undertake the work, which was entrusted to the Public Works Committee.



BROOKVALE ROAD REFUSE UTILIZATION SALVAGE WORKS, WITTON.

Proposed " Gradual Abolition of Middens."

Twenty years later it was resolved to take measures to prevent the fouling of town sewers, and with this end in view the Council commenced the adoption of the " interception " system—defined in the report to the Council at that time as the " Gradual abolition of middens, and the institution of a new privy system based upon the principle of exclusion from the sewers and the weekly collection of all excrementitious matter, solid and liquid." Control of the department then passed to the Sewage Committee, and three years after, on the eve of the formation of the Drainage Board, the collection of refuse was transferred to the Health Committee. When the pan system was put into operation there were nearly 20,000 middens or ashpits in the town.

When the Health Committee took over the management of the Interception Department the method of treatment was to form the ashes into a sort of pound, into which the contents of the pans were emptied and mixed by hand labour, the dry refuse being screened. The first improvement effected by the Health Committee was to use machinery to screen the ashes, and the next was to substitute mechanical means for mixing, an expenditure of £5,500 being incurred for this purpose. Then the sum of £4,000 was expended for machinery for drying the pan contents by heat evolved from the combustion of dry refuse, one of the first steps towards the scientific treatment of the town's refuse.

Rapid Conversion to Water-carriage System.

The work of installing the pan system was rapidly carried out, and in 1880 (seven years after the work was commenced) over 30,000 of these receptacles had been installed, and by 1885 over 40,000. Concurrently with this work the water-carriage system had been introduced, and in 1885 it was estimated that 10,000 water closets were in use throughout the City. The conversion of pans to the water-carriage system then proceeded rapidly, and by 1911 only 3,550 pans remained in the City. About 400 pans are still in use in rural areas not served by sewers.

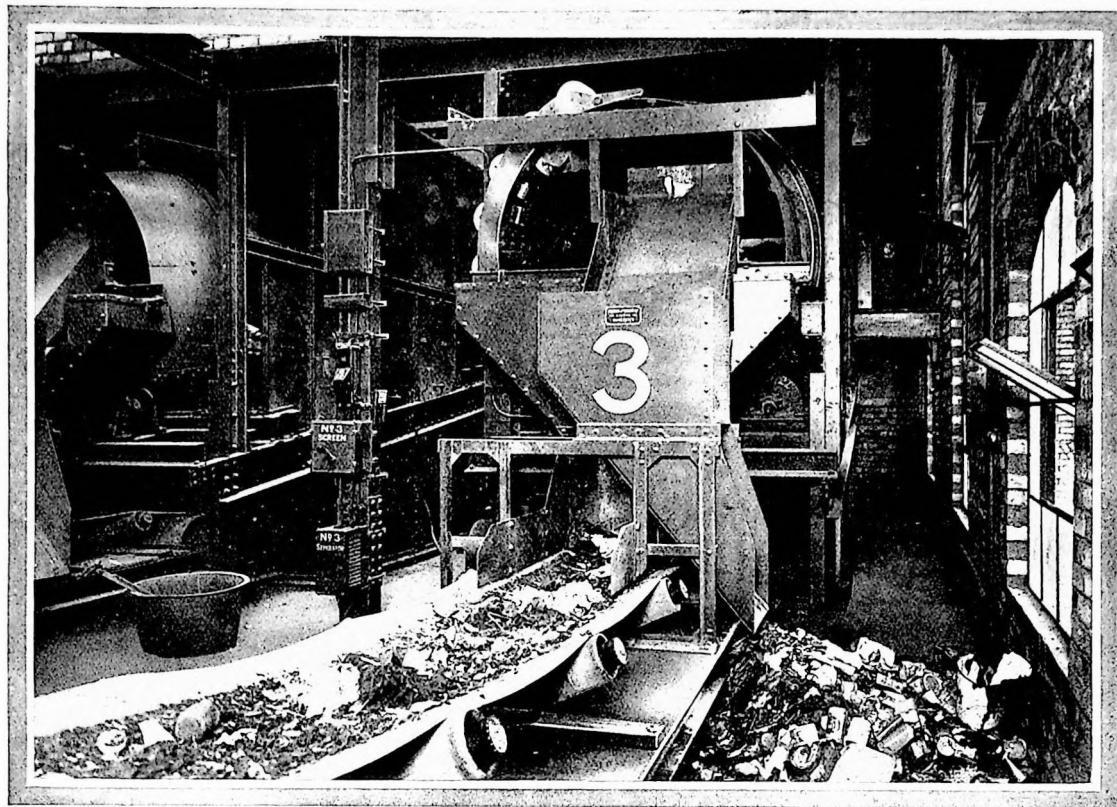
In 1911 the department was re-named the Refuse Disposal Department and transferred from the Health Committee to the new Lighting, Stables, and Refuse Disposal Committee. During the same year five districts were annexed to the City, the area being increased from 13,477 to 43,601 acres, with an increase in population from 565,000 to 895,000.

Refuse Collection under the " Continuous " System.

The City Council after the war re-designated the department. It became the Salvage Department, and its first task was the re-organization of the method of refuse collection under a scheme which had been prepared in 1914 known as the " continuous " system.

The " continuous " system is so organized and elastic in its operation that the frequency of collection can be accelerated or otherwise at the will of the management, and an area calculated to provide sufficient work for one week in summer is allotted to each collecting unit.

Within the boundaries of this area or " round " the route of the collecting vehicle is laid down in a continuous line from start to finish. Every house to be visited has its definite place in the working list, and if the men are unable to obtain access for the purpose of removing the refuse a card is left informing the tenant that the men have called and will be round again in one week's time.



MAGNETIC SEPARATOR AND PICKING BELT BROOKLYN ROAD REFUSE UTILIZATION WORKS, WITTON.

The driver may not deviate from the route laid down, and at the end of each day reports the last address at which he has called to a clerk, who plots out on a progress chart a length of line corresponding to the number of houses visited. With the aid of this chart, which also shows the average weight of refuse per load, the district inspector is able to see exactly where the work is in arrears, and to allocate help by spare vehicles when seasonal and other increases render that necessary.

Electric Vehicles Supersede Horse Haulage.

Until the year 1918 the transport of the department was carried out by horses. The "continuous" system could not be economically worked entirely by horse haulage, as the outer areas in the districts were too far away from the depôts for the horses to make more than two full-loaded journeys per day, and the first electric vehicle was then purchased. Now seventy-nine electric vehicles are in commission, the capacity varying from seven to thirteen cubic yards. At each of the works where electric vehicles are employed steam generating sets have been installed to supply electric current for the charging of the batteries, lighting works, and running the works plant.

The Salvage Department is also responsible for the regular emptying of cesspools in the City. This is carried out by means of two thirty-five horse-power petrol motor wagons with 800-gallon tanks.

Under various powers obtained by the City Council the majority of the ashpits in Birmingham have been converted to dustbin sheds, and ninety per cent. of the properties of the City are now under the standardized bin system of the department, several thousand pounds having been spent by the Corporation in the provision of dustbins at properties where there are properly-constructed ashplaces not requiring conversion.

A successful voluntary "dustbin hire and renewal" service is run by the department, covered by a first payment of 1s. 6d. and annual instalments of 1s. 11d. per bin (see *Utility Services*, page 133). The hirer agrees to hire all dustbins necessary to fulfil the legal requirements of the Corporation, who undertake to maintain the bins in good order while the agreement is in force.

The total tonnage of refuse dealt with by the department during the year ended March 31st, 1927, was 246,920 tons—a yield (exclusive of cesspool contents and market refuse) of 225 tons per 1,000 persons per annum. This is the lowest tonnage per 1,000 persons in any of the twelve largest cities and towns in England.

Disposal Depôts and Plants.

In 1919 the disposal side of the department was carried on from fourteen depôts, at nine of which there were destructors. This number was reduced to thirteen on the introduction of electric vehicles and the re-organization of collection in the King's Norton and Lifford areas. Later on the Salvage Committee decided upon the abolition of tipping of unscreened house refuse and the reduction of administrative costs by enlarging the various districts, and so reducing the number of depôts. To accomplish this and other methods of modernizing its disposal plants schemes were prepared and approved by the City Council for additions at an estimated cost of £450,000.

In 1924 a new salvage utilization plant at Brookvale Road, Witton, was opened. The works serve an area of 6,830 acres, containing 32,000 houses, with a population of 150,000 persons, and its opening enabled the

department to abolish three tips, to close two dépôts, and discontinue the tipping of 16,000 tons per annum of unscreened refuse.

The opening of the new Tyseley plant, the third and latest of the development schemes to be completed during the past four years, has resulted in the closing of three dépôts and seven tips, and the abolition of the tipping of all unscreened house refuse inside the City areas, with the exception of about 3,000 tons per annum at one small tip in the western part of the City, where it is carried out in accordance with the instructions issued by the Ministry of Health. Over 45,000 houses have been erected in the area to be served by the new works, and the district is rapidly developing.

The works at Liford serve an area of over 10,000 acres, chiefly of a rural character, and it is in this area that the department has to deal with pans and cesspools. This dépôt is being modernized and extended to cater for an additional 12,000 houses, which are being erected at the rate of 1,000 per year in this district.

Waste Utilization.

A modern organic waste utilization plant, the largest municipal plant of its kind in the country, is in operation at the Montague Street Works, engaged on the conversion of the City's animal and fish waste into feeding meals and fertilizers.

About 4,000 tons of slaughterhouse and fish waste are dealt with annually, from which about 1,000 tons of feeding meals and fertilizers, and about eighty tons of fat are produced. The annual turnover of the plant is about £10,000, and half the product is exported. The whole of its operations is under the scientific control of the laboratory, where constant study is given to the output of first-quality products by the most efficient methods.

A number of experiments have been made for the scientific treatment of market and vegetable refuse. The installation of a plant for this purpose has been approved, and it is hoped that this refuse may be capable of profitable treatment, instead of being, as at present, a financial loss to the department.

The technical staff includes mechanical, electrical, and constructional engineers and chemists, the latter being provided with a fully-equipped modern laboratory for carrying out research work with the object of exploiting the various by-products of the City refuse.

Obtaining Accurate Data.

The importance of the use of scientific instruments in the burning of refuse has been realized, and there have been installed at several of the works continuous CO₂ and temperature recorders, steam pressure recorders, and boiler feed water recorders.

The CO₂ recorder provides excellent means of supervision of the fires. By maintaining a high percentage of CO₂ in the flue gases a greater quantity of refuse is burned, and by reason of the more complete combustion of the refuse more steam is available. By means of the temperature recorder the temperatures of the flue gases are automatically graphed, and from the graph can be seen the state of the fires as existing at any time of the day or night. The boiler feed recorder states the amount of water evaporated by the boilers, and, with this information available, it is possible to obtain accurate data as to the amount of water which can be evaporated per unit of refuse burned.

Clinker. Mortar. Slabs.

The flues are kept clear of dust by means of a series of steam blowers fixed in the combustion chamber boiler passes and flues. The residuum from the burning of refuse meets a ready sale, and is chiefly used for the base in the construction of roads. A large quantity of clinker is also crushed and graded into various sizes and used for concrete houses, concreting, road making, media for bacteria beds, and garden paths.

Mortar mills are installed at five of the works, and mortar is made from the fine-crushed clinker mixed with lime. Slabs of assorted size are made from crushed clinker and cement, and find a ready sale for garden paths, courtyards, etc. In some cases the slabs are reinforced to meet special requirements.

System in Administration.

A costing system was inaugurated in 1918, and the expense of costing is .63 pence per ton of refuse dealt with. Every process and vehicle in the department is costed, and each week, month, or quarter, according to requirements, costing returns of every phase of the work are prepared for the superintendent, and are developed in such a form that they can be split into further sections if required. New methods and types of vehicles are constantly being tried in the service, and close costing of these innovations is of great value in proving which is the most economical, and in making decisions with regard to future development.

The administrative work of the department is carried on from the central offices in Corporation Street, various sections being responsible for sales, organization, costing, and accounting.

The accountancy staff consists of the chief accountant and assistants who keep the books of the department and pay the weekly wages of the 860 workmen employed.

Chapter XXII.

THE MUSEUM AND ART GALLERY.

THE first step towards the formation of a municipal collection of works of art was the presentation in 1864 of a large picture of "Dead Game" by Edward Coleman, one of Birmingham's earliest painters of note, by a body of subscribers as a donation towards the proposed gallery of art. The Birmingham Society of Arts offered to lend permanently a number of pictures belonging to them, other offers of assistance were received, and as a result a room in the Free Library was made available for their reception, and the Corporation Art Gallery was opened to the public in August, 1867. The collection then consisted of fifty-six pictures, of which about a dozen belonged to the Corporation.

Within five months 34,560 people had visited the exhibition, and during the following year no fewer than 200,000. In 1870 £1,000 was raised and a beginning made towards the formation of a Museum of Industrial and Decorative Art by the purchase of Indian metal work, jewellery, and textiles, Venetian and other glass from the South Kensington Museum. Soon afterwards Mr. Joseph Chamberlain, then Mayor of Birmingham, gave £1,000 for the purchase of further examples of industrial art, and the Guardians of the Proof House presented the Museum of Arms, which, with the exception of the Tower of London and Wallace collections, is unequalled.

Munificent Gifts.

In 1877 the collection was temporarily housed in Paradise Street, and then removed to Aston Hall. The need for a permanent home for the collection in the City became obvious, and a gift of £5,000 from Sir Richard and Mr. George Tangye, and a promise of another £5,000 if donations were received for the same amount, resulted in a fund which eventually reached £23,000 being raised towards this end.

The Art Gallery was completed and opened in 1885, the Tangye brothers presenting their valuable collection of Wedgwood ware. Other generous gifts followed. Twenty-six oil paintings by David Cox were bequeathed by Mr. J. H. Nettlefold; Mr. Joseph Chamberlain presented W. J. Muller's "Prayers in the Desert;" and many valuable pictures were given by others. One of the most important gifts was the first instalment of the Feeney collection of decorative objects illustrating the art of many nations. In succeeding years Mr. Feeney continued to make large additions to this collection.



THE ART GALLERY.



Photograph—Ernest H. Fletcher, Moncton, Birmingham.

THE ENTRANCE, ASTON HALL.

From the opening in 1885 the permanent collections grew rapidly in number and importance until the galleries became inadequate for their proper exhibition, and it became evident that a new building, or a large extension of the existing galleries, had become necessary. Owing to overcrowding in official departments the Corporation undertook the erection of the Council House extension, with proper accommodation for an Art Gallery in the upper floors, but the actual work had not been commenced when in 1905 Mr. John Feeney died, bequeathing to the City the sum of £50,000 for the erection of an Art Gallery.

The Feeney Galleries.

The new galleries were opened by Mrs. John Feeney on July 19th, 1912. In addition to the administrative offices the part of the Feeney Galleries then completed consisted of ten picture galleries. Further extension was undertaken almost immediately, and in 1919 six more rooms for pictures and two spacious galleries, which have been devoted to a Museum of Casts and Classical Sculpture, were opened. The corridor or bridge leading to the Feeney Galleries was specially planned for the display of the Burne-Jones and Morris tapestries of the Sangrail and other subjects.

The permanent collections, both of pictures and objects of decorative art, are now so considerable that here it is only possible to give a bare outline of the rooms and mention but a few of the many generous donors to the gallery. The whole of the contents have been contributed by private



IN THE ART GALLERY.

citizens. The picture galleries contain works of many schools of English painting, but the collection is distinguished by two main features: the important series of paintings, drawings, and studies by the English pre-Raphaelite painters and their friends and followers—Millais, Holman Hunt, Rossetti, Madox Brown, Arthur Hughes, Sandys, Simeon Solomon, and others, together with Sir Edward Burne-Jones, a native of Birmingham; and the very representative collection of works, both in oil and water-colour, by David Cox (1783-1859), Birmingham's greatest landscape painter.

Loan Exhibitions.

After the opening of the Feeney Galleries it was possible to re-commence the popular loan exhibitions, which had been suspended for want of space. Since 1912 the public have had the opportunity of seeing collections of pictures by old masters of the Italian and other schools belonging to Lady Jekyll and Lady Horner, the collection of pictures and other works of art belonging to the Earl Beauchamp, the collection of pictures in the possession of the late Right Hon. Wm. Kenrick, exhibitions of works by A. Legros, Sir Alfred East, Sir Frank Short, Sir D. Y. Cameron, Muirhead Bone, Frank Brangwyn, Russell Flint, Eric Kennington, Gwelo Goodman, Albert Goodwin, pictures by Canadian artists from the Canadian fine art section of the British Empire Exhibition, and portraits by members of the Royal Society of Portrait Painters.

Decorative and Industrial Art.

The collections of decorative and industrial art include examples of jewellery, gold and silver work, arms and armour, Limoges enamels, wood, ivory, and stone carvings, decorative iron and steel work, Egyptian and Roman antiquities, textiles, lace, majolica, porcelain, and pottery.

In 1883 a large collection of works of Italian art was purchased on behalf of the committee by the late Sir J. C. Robinson, and that collection has been constantly increased by purchases made by the late Keeper (Sir Whitworth Wallis) both abroad and at home. A sum of nearly £10,000 from the Art Gallery Purchase Fund has been thus expended in extending the collections of decorative art, which has been further enriched by a long list of gifts from private individuals and associations.

Since the Art Gallery was opened in 1885 more than 21,000,000 people have visited it, and more than 431,000 catalogues have been sold. In the earlier days of the gallery, before it had a habitation of its own, three members of the Birmingham Royal Society of Artists, Mr. William Hall, Mr. Allen E. Everitt, and Mr. Jonathan Pratt, acted in succession as hon. curators. On December 2nd, 1884, the Town Council appointed, as Keeper of the Corporation Art Gallery, Mr. Whitworth Wallis, who received the honour of knighthood in 1912 in recognition of services rendered to art, and it is in a large measure due to his great ability and whole-hearted services that the Birmingham Art Gallery has attained the high position it occupies to-day. Sir Whitworth Wallis held this position until his death at the latter end of 1926.

NATURAL HISTORY MUSEUM.

The establishment of a Natural History Museum in Birmingham was first mooted forty-five years ago. The idea received little support, and the town had to remain satisfied with the collection of natural history specimens assembled by Dr. Sands Cox at Queen's College, which later on was handed over to the care of the Corporation, and eventually removed to Aston Hall.

But collectors and enthusiasts interested in scientific education continued to agitate in favour of a public museum. When in 1899 the City Council acquired land for the purposes of the extension of the Art Gallery and Municipal Offices, the success of the agitation was assured.

In 1904 the City Council resolved to allocate the upper floor of the new extension facing Congreve Street for a Natural History Museum, undertaking the maintenance and administration, but leaving the provision of the collections to the generosity and enthusiasm of those interested in the Museum's success.

Notable Gifts.

The principal gifts received during and subsequent to the erection of the Museum were the Blatch Collection of Coleoptera, presented by Sir George Kenrick ; a collection of British birds and foreign birds' skins from Mr. Walter Chamberlain ; the Scott Collection of British and Foreign Lepidoptera, from Mrs. Adrian Hope and Mrs. Farnham ; the Bradley Collection of Hymenoptera, Diptera, Lepidoptera, etc., from Mr. A. R. Hollinsworth ; Herbarium of British Plants, from Mr. J. E. Bagnall ; a large collection of British and foreign plants, from the late Sir Benjamin Stone ; and extensive collections of shell, fossils, minerals, birds, and birds' eggs and nests, insects, marine invertebrates, and numerous mammals and miscellaneous specimens.

The museum forms a department of the Art Gallery, and is in charge of the Museum and Art Gallery Committee, and in 1912 an Assistant Keeper of the Natural History Department was appointed by the City Council. The preliminary work in connection with the arrangement of the collections was heavy, but in July, 1913, some of the rooms were opened to the public.

An Ambitious Scheme.

A comprehensive topographical and physiographical scheme for the arrangement of the whole of the specimens was drawn up by the late Professor F. W. Gamble, F.R.S. It was also intended to have as representative a collection as possible of the fauna, flora, and geology of Birmingham and the surrounding country, so that in the end the museum might contain a complete representation of the natural history of the Midlands.

Lack of space prevented the whole of this ambitious scheme being carried out, as it was found necessary to allocate one entire gallery to the display of nesting groups of British birds as a memorial to the late Alderman C. G. Beale. Four large topographical groups were, however, eventually provided by generous donors, and have proved one of the most popular features in the museum. The "Beale" collection is pronounced by experts to be unsurpassed in quality, comprising forty-two distinct cases, each faithfully depicting the actual nesting site, the whole of the surroundings, foliage, etc., being exhibited after special treatment and colouring.

There is an extensive collection of British and foreign freshwater and marine shells formed by the late Registrar W. H. Whitelock, and a comprehensive series of land and freshwater shells collected by the late Mr. P. T. Deakin and presented by Mrs. Moore. Upwards of 2,000 beautiful botanical drawings, together with microscopic slides and other objects, have been presented by Mrs. T. H. Russell.

A nearly complete collection of British birds (numbering about 1,200), all pictorially mounted, together with nests and eggs to the number of over 14,000, comprises probably the finest series in existence of young nestling birds in their downy plumage. For this valuable gift the City is indebted to the Feeney Charitable Trustees, who in 1924 purchased the collection and presented it to the museum.

Chapter XXIII.

THE MUNICIPAL BANK.

BIRMINGHAM'S great experiment—the first Municipal Bank—arose out of a desire during the war period for an organization which would accommodate the particular requirements of the working man in saving small amounts, as explained by Mr. Neville Chamberlain (who was Lord Mayor at the time and chief sponsor of the movement) when opening the new head offices of the bank.

The National War Savings Certificate Scheme only partly met the need, and it was apparent that to meet the financial stringency that would inevitably succeed the cessation of hostilities the workers, then enjoying a period of unprecedented prosperity, needed to accumulate a reserve.

Legislative sanction and statutory authority were eventually sought to enable local authorities having a population of over 50,000 to establish Municipal Savings Banks. The prime object of the banks was to be the accumulation of funds that would be available for investment in securities issued for war purposes, and, their sphere of usefulness ended, were to expire conveniently when the securities in which the funds were invested reached maturity.

The Hopes Birmingham Entertained.

The larger joint stock banks opposed the proposal so vigorously that the Bill was withdrawn, and the hopes Birmingham entertained for the establishment of a Savings Bank fell to zero. Undismayed, Mr. Chamberlain interviewed representatives of the banks which had so successfully opposed his policy, and opened afresh negotiations with the Local Government Board and the Treasury. The outcome was that a new Bill was introduced incorporating arrangements agreed to by the joint stock banks. Where the original Bill sought to enable towns of 50,000 inhabitants to establish such a bank, the new Bill increased that limit to a quarter of a million, and a limit was imposed as to the maximum deposit to be accumulated; restrictions were introduced which placed the control of the investment of funds in the hands of the National Debt Commissioners and the earning capacity of invested funds by the Treasury. Withdrawals on demand were not to exceed one pound, and the bank was to cease to exist three months after the termination of the war.

The new Bill received the Royal Assent in August, 1916. The successful termination of the City's efforts was due chiefly to the untiring energy and enthusiasm of the Lord Mayor (Mr. Chamberlain), without whose help the scheme would never have materialized.

The opening of the bank in September, 1916, coincided with a propaganda campaign throughout the City to attract the interest of the investors for whom the bank was primarily established. The Lord Mayor, the City Council, and many public-spirited enthusiasts addressed over one thousand meetings in all parts of the City for the purpose of broadcasting the advantages of the bank and encouraging the workers to enjoy the opportunities offered while wages were so high. The success of the scheme was immediate, although those early investments appear puny in comparison with recent figures.

A Coupon Method of Saving.

The coupon method of saving was inaugurated, supplies were distributed to joint stock banks throughout the City, and when an employer

presented the usual cheque for wages he stated what amount was to be paid in coupons. The worker had, meanwhile, indicated the sum to be subtracted from his wages, and was given gummed coupons representing that amount. When the card, to which the coupons were attached, was complete the amount thus represented was entered in a pass book and the depositor was registered and a new coupon card issued for future use.

Up to this stage the coupons were all of one denomination, but presently requests were received for coupons representing higher values than one shilling, and designs were prepared and coupons printed of the value of five shillings and later for one pound, half a crown, and sixpence.

Head Office Accommodation.

The Head Office accommodation was at this time totally inadequate for the administration of this rapidly-growing establishment. It comprised a semi-basement office furnished with a counter about five yards long and a screened-off section measuring nine feet by five feet. The need for branch banks soon became urgent, not only to deal with the phenomenal strides the bank itself was making, but also to meet the convenience of depositors. Eventually it was found possible to relieve the pressure at head office by forming branches in certain larger works in the City, and arrangements were made for depositors also to withdraw money from these branches. The amount to be withdrawn without notice was, it will be recollected, limited to one pound, and it was possible, therefore, to forecast fairly accurately the cash requirements of each branch.

The New Bank Develops.

Such was the Birmingham Corporation Savings Bank, which, in accordance with the statutory requirement imposed upon it, came to an end three months after the end of the war. During the short period of its existence—that is, from September 29th, 1916, until October 31st, 1919—£603,319 5s. 8d. had been deposited, £295,708 19s. 1d. withdrawn, and 24,411 depositors enrolled. The venture had already justified its existence, and it was not likely that so promising an institution would thus end its sphere of usefulness. The Corporation accordingly obtained powers by means of a private Bill to establish a Municipal Savings Bank, freed from certain of the restrictions that had limited the scope of its development under the old scheme. The Bill embodying these powers received the Royal Assent in 1919, and the Birmingham Corporation Savings Bank was supplanted by the Birmingham Municipal Bank.

Parliamentary formalities were completed on August 28th, 1919, and, thanks to preparations made by the City Council in anticipation of a favourable conclusion to their efforts, on September 1st the bank was launched on its new voyage, equipped with a Head Office and seventeen branches. The necessary action was taken to effect the transference of accounts from the temporary bank to the Birmingham Municipal Bank, and of the 24,411 accounts remaining open in the old bank no fewer than 22,592 were voluntarily transferred to the new.

The new bank established a Housing Department empowered to advance money for housing purposes. The bank has advanced to date no less than £2,557,495 to house purchasers, and of this sum £852,777 has been advanced in respect of municipal houses on terms which are detailed in the chapter on housing and the City estates.

The Head Office of the bank was meanwhile extending, and the matter of securing less restricted accommodation became an urgent necessity. In 1925 the Corporation secured premises in Edmund Street, which enabled the bank to move into its own self-contained offices. The opening of new branches was not marked by a reduction in its transactions, but, on the contrary, led to an increase in the number of depositors. The Housing Department showed a remarkable increase, and in the short space of two years the number of mortgages in operation increased from 136 to 5,380. The first permanent branch was opened at Sparkbrook in 1921, and now there are 45 branches.

Utility Services.

Facilities were made to extend the utility services of the bank, and arrangements for the payment of water charges and gas and electricity accounts have been put into operation. Fees for the hire of dustbins from the Salvage Department are also payable at any office of the bank. Technical formalities precluded the possibility of dealing with rates in the same way, but this matter is exercising the attention of the Bank and Finance Committees at the present time, and hopes are entertained that the difficulties in the way will be surmounted. These arrangements, while of great convenience to the depositors, are, in addition, the means of effecting economies in the administration of the services concerned. In addition to the foregoing the bank is empowered to make advances for the purchase of live stock, fruit trees, seeds, fertilizers, and implements under the Land Settlement (Facilities) Act, 1919, and has dealt with the payment of interest in connection with local housing bonds.

In every branch development has been sustained, and an impression of the bank's progress may be gauged from the following table of the transactions in the Savings Bank and House Purchase Departments :

	Savings Bank.	House Purchase.
	£	£
Seven months ended March 31st, 1920...	163,787	152
Year ended March 31st, 1921 ...	385,466	6,368
" " " " 1922 ...	442,383	12,174
" " " " 1923 ...	577,717	13,356
" " " " 1924 ...	822,680	15,803
" " " " 1925 ...	1,069,045	23,885
" " " " 1926 ...	1,270,811	36,770
" " " " 1927 ...	1,364,061	52,345

The number of open accounts at the end of each financial year since the inception of the bank shown below, and the deposits standing to the credit of depositors, demonstrate the rapid strides the bank has made :

	Accounts.	£
Seven months ended March 31st, 1920...	40,130	746,984
Year ended March 31st, 1921 ...	62,119	1,405,978
" " " " 1922 ...	76,230	1,869,596
" " " " 1923 ...	100,245	2,883,942
" " " " 1924 ...	133,420	4,243,541
" " " " 1925 ...	166,894	5,611,532
" " " " 1926 ...	199,605	6,799,511
" " " " 1927 ...	225,760	7,800,221

At the end of December, 1927, there were 241,429 open accounts, and the balances stood at £8,376,638.

The popularity of the Birmingham Municipal Bank is probably due to the security enjoyed by the depositor and the generous rate of interest payable, while skilful advertisement and administration have also undoubtedly contributed to the results achieved. It has not been able to steer its course by reference to precedent, and citizens interested in a more comprehensive story of its beginnings and extraordinary popularity and prosperity should get from their bookseller or from any branch of the Bank a book written by the General Manager of the Bank, "Britain's First Municipal Savings Bank" (Blackfriars Press, 7s. 6d. and 1s. 6d.).

Chapter XXIV.

SMALL HOLDINGS AND ALLOTMENTS.

SMALL HOLDINGS.

BIRMINGHAM has not been backward in making use of the powers conferred by Parliament for the acquisition of land for small holdings and allotments. The Land Settlement (Facilities) Act, 1919, passed to enable county councils and county boroughs to provide for the large number of ex-service men who wished to settle on the land, as well as the Small Holdings and Allotments Acts of 1908 and 1926, have been operated.

Early in 1920, under the provisions of the first-named Act, the City Council purchased the Canwell Estate of about 3,600 acres, eleven miles from the City, in an endeavour to satisfy the needs of a class of tenant rather different from the usual rural small holder with previous experience of agricultural pursuits, inasmuch as most of the applicants were townsmen to whom the experiences and the results of the war had made an open-air life desirable.

The Canwell Estate.

A complete survey of the estate and of the needs of the prospective small holders was made, with due regard to the suitability of the soil to the requirements of varied classes of farming operations by different tenants and markets for the disposal of produce. Three thousand acres were found to be well suited for the small holdings, and 200 acres sold as unfit for development. The remainder consisted mainly of woods and ornamental park-land. The large woods have been retained by the City, and are producing timber which is used in the equipment and maintenance of the buildings; the smaller woods are let to the tenants for pig and poultry runs. The mansion and grounds were transferred to the Public Health Department to be used as a convalescent home for ex-service men.

A village school and a private chapel were included in the estate. The former was sold to the school managers, while the latter was handed over to the Ecclesiastical Authorities and a conventional district was formed. Thus, with the exception of the 200 acres re-sold and the grounds transferred to the Public Health Department, the whole of the estate (with the exception of the large woods) has been utilized for small holdings.

The estate was mapped into sections, according to the class of soil, for market gardening, mixed farming, poultry and pig breeding, and dairying. The northern (or Weeford) end consists of deep sandy loam suited to market gardening, and the demand in 1920 being greatest for this type of holding, a start was made on this section first. Fortunately it is intersected with good main roads, and it was possible to lay the holdings out with good frontages, thus avoiding the expense of making new roads. These

holdings vary from five to fifteen acres. Most of this land being arable, it was necessary to seed down two or three acres to pasture near each homestead for small holders' horses, cows, or pigs.

Mixed Holdings for Stock Rearing.

The Shirral and Canwell sections were next developed. This area was more varied in character, consisting largely of light gravelly soil of shallow depth, while in other parts it was a medium clay. These sections were suitable for mixed holdings of from twenty to forty acres, the tenants devoting themselves to pig-breeding, stock-rearing, and, in addition, owing to being fairly close to the City, some market gardening. The poorer land has been made into five to ten acre lots for pigs and poultry, and the permanent pasture into small dairy holdings.

The other sections, Brockhurst and Hints, comprising some of the best land in the district, were developed together. Difficulty and heavy expense were entailed in these areas, as most of the land lay in the middle of the estate away from the then existing roads. New roads had to be made and old farm roads re-made. The extra capital expenditure, in view of the rich nature of these sections of the estate, especially the Hints section, seemed justified. The soil is a deep clay-loam, parts of which had been laid down to pasture during the agricultural depression of the eighties. The larger holdings have all been formed in this area—as near fifty acres as possible without unnecessary division of the fields—which is the dairying portion of the estate. Under the Small Holdings Acts no holding must be less than one acre or more than fifty acres, or, if over fifty acres, must not be of an annual value for income tax purposes of more than £100 per annum.

Throughout the estate there are a number of cottage holdings—labourers' cottages, with one acre of land attached—for partly-disabled men with pensions. Also dotted among the larger farms are similar cottage holdings for men who earn their living by working for tenants of these farms, and devoting spare time to their one-acre holdings. Canwell has provided 137 holdings from its 3,000 acres.

Houses and Out-buildings.

Apart from the existing houses and buildings which were suitable for their new purpose, the equipment of the estate fell under two heads:

- (1) Existing houses and buildings to be adapted for small holding purposes;
- (2) New houses and buildings.

The first presented a difficult problem. To adapt a big farmhouse with a large range of more or less antiquated buildings into up-to-date and suitable accommodation for modern small holdings was no small task. However, by careful planning it was found possible in every case at Canwell to provide three, four, and in some cases as many as six self-contained sets of buildings for the holdings immediately adjoining, the farmhouses in many cases being made into two, and the labourers' cottages attached to the farm being utilized for the remainder. Great care was necessary in laying out the holdings immediately adjoining these existing homesteads in order that each tenant had easy access to his buildings from his land without having to interfere with his neighbours, that the land immediately adjoined the house and buildings, and that each range was self-contained and as far as possible private.

In the second case, the provision of new houses and buildings, it was decided to erect the same type of house on each holding. This contains

living-room, parlour, scullery, three bedrooms, and bathroom. On some of the smaller holdings semi-detached houses were erected on the score of economy.

The thirty-five to fifty-acre holdings consist of a block of buildings surrounding a yard containing cow-shed for ten, mixing-house, stable for two with loft over, cart-shed, two pigsties, and two loose-boxes. Holdings from twenty to thirty-five acres contain cow-shed for eight, two-stalled stable with loft over, loose-box, cart-shed, and two pigsties ranged on two sides of the yard. Holdings from ten to twenty acres have cow-shed for four, loose-box, cart-shed, and pig-box. Holdings from five to ten acres have two pigsties (or pig-box) and large shed with double doors. Five-acre holdings have a pig-box only. There are, of course, variations according to the requirements of the particular holding.

Problem of Sanitation and Water Supply.

Drainage and sanitation was a knotty problem in the Canwell scheme, the "water carriage" system being out of the question on the score of expense. Earth closets are provided in the new houses, and the slop water is disposed of by means of filters and irrigated over the land. The drainage from the farm buildings is collected in a tank in the yard, and from time to time emptied over the holding.

The water supply on the estate, which is an all-important question, is derived partly from springs and partly from the mains of the South Staffordshire Waterworks Company. The Company's water is supplied in bulk by meter, and distributed by the Corporation and also through the Company's ordinary service mains direct to the tenants. Except at the northern end of the estate at which the tenants pay for the water direct, to the Company, the Corporation levy a rate on the tenants according to the rateable value of the holding and the number of taps, which varies from £2 to £5 per annum.

The management of the estate consists in the upkeep and repair of between 140 and 150 houses and farm buildings, including eight large farmhouses with long ranges of farm buildings, seven smaller farmhouses and buildings, fifty-eight new houses and buildings, and forty-eight existing houses and cottages with their buildings. There is also "surplus property," such as the home farm, estate yard and offices, workmen's cottages, and a public house. About twelve miles of new wire fences have been erected and seven miles of new roads made. For the maintenance of this property an estate staff consisting of bricklayers, carpenters, woodmen, and carters is kept, all repairs and maintenance work and new equipment being carried out by direct labour.

Canwell is the second largest estate of the kind in the country. An agricultural show is held annually by the tenants.

The rents vary considerably according to the class of land, ranging from 30s. to 40s. per acre for the land only. The rents of the houses and buildings range from £13 per annum in the case of an existing cottage to £25 per annum for the larger adapted houses and the new houses.

"A Very Notable Exception."

In closing this survey of Birmingham's activity in meeting the demand for small holdings, may I quote from a report of the Ministry of Agriculture and Fisheries, which says: "A very notable exception to the general rule in regard to the unsuitability of a county borough to administer a genuine small holdings scheme is the City of Birmingham. . . . This Corporation

had no pre-war holdings, but was faced with a heavy demand for land on the part of ex-service men. Up till 1st December, 1920, when the preferential lists of application for small holdings was closed, about 400 ex-service men had applied to the Corporation for nearly 4,800 acres of land. Fortunately the borough had as Chairman of the Small Holdings Committee an experienced agriculturalist, who was prepared to devote a great deal of time and care to the task of settling these applicants."

ALLOTMENTS.

In Birmingham, prior to the Cultivation of Lands Orders made under the Defence of the Realm Regulations, the number of allotments controlled by the Corporation was about 4,000. The late war, however, gave a big fillip to the movement, and in order to assist in maintaining the food supply local authorities were given wide powers to enter upon any unoccupied land without consent, or, if occupied, with the consent of the occupier and landlord, and either cultivate it themselves or let it for cultivation. The Parks Committee, upon whom devolved the administration of the Orders, at once put the machinery in motion for the provision of war-time allotments. The demand was immediately enormous, no fewer than 13,274 plots being laid out as a war-time measure.

The powers and duties of the Council relative to allotments provided under the Allotments Acts were in January, 1922, transferred from the Parks Committee to the Agricultural and Small Holdings Committee, who were successful in retaining a large proportion of war time sites as permanent allotments, comparatively few of the enthusiasts who acquired a *flair* for allotment work during the war desiring to relinquish their holdings.

Allotment Land Owned by Birmingham.

The number of allotments now under the control of the Corporation is nearly 11,000, on 161 sites, mainly on the outskirts of the City, with a total area of about 1,120 acres. It is estimated that there are also 4,000 allotments let by private owners. The area of freehold allotment land owned by the City is about 430 acres, the remainder being held on annual tenancy or leased, and the largest freehold site, not only in Birmingham but in the whole country, is the Wyrley Birch Estate, comprising ninety-nine acres and accommodating nearly 1,000 tenants.

Administration of the Allotments Acts is now carried out by a special Allotments Committee and not the Agricultural and Small Holdings Committee, though both committees have at present the same chairman. As the 1922 Act provides that one-third of the committee shall be persons who are not members of the Council, but experienced in the management and cultivation of allotments and representative of the tenants, the interests of the latter are fully safeguarded.

The allotments are generally let at an annual rent of 10s. per 300 square yards. There are some plots of 400 and some of 600 square yards. The rents of the pre-war plots were payable quarterly or half-yearly, but a change to yearly collections has been effected without friction.

Healthy Rivalry and Fellowship among Plot-holders.

On the larger sites the tenants have generally formed themselves into Allotments Associations, which foster good fellowship amongst the members and promote their interests in a manner that could not be achieved by individual action. These associations organize the annual shows which do so much to encourage a healthy rivalry among plot-holders. The Allotments

Committee have shown their confidence in the associations by giving them a large share in the control of the sites, the rents of which are in many cases collected by them, and their appreciation of this confidence in the associations is expressed by their readiness to execute by their own labour and at their own cost minor repairs to fences and roads, which otherwise would have to be carried out by the committee.

Owing to building development the Allotments Committee have from time to time to surrender sites rented or held on lease, with consequent dispossession of plot-holders. The policy of the committee has been, as far as possible, to acquire the freeholds of desirable land so that tenants may not run the risk of displacement and permanently to satisfy the insistent demand of new applicants. So much is security of tenure of plots appreciated that tenants are generally willing to pay a higher rent where this is attained. The committee have adopted a standard hut for new sites in an endeavour to avoid the ramshackle erections which tend to become an eyesore on allotments, accompanied by a scheme of planting privet along roadside borders of the sites to improve their appearance.

Birmingham allotments had no small share in producing the £7,000,000 worth of food that was grown during 1927 on the allotments in this country, and the work of the City Council through its Allotments Committee is of a social and economic importance that citizens will fully appreciate.

Chapter XXV.

MENTAL DEFECTIVES.

ONE of the more serious of the social duties of the Corporation is that of dealing with the City's mental defectives, and some reference is made to this work in the chapter on Education (Special Schools) and also in the chapter dealing with Mental Hospitals. All matters relating to the exercise by the Council of their powers under the Mental Deficiency Acts, 1913 to 1919, are, however, dealt with by the Mental Deficiency Act Committee, which works in co-operation with the Education and Asylums Committee and is also in constant touch with the Guardians.

So little is known generally of the activities of the Mental Deficiency Act Committee that it may not be inappropriate briefly to set out their duties: (a) To ascertain what persons within their area are defectives to be dealt with under the Act otherwise than at the instance of the parent or guardian; (b) To keep such persons under suitable supervision or deal with them by sending them to institutions or by placing them under guardianship; (c) To provide accommodation for such persons when sent to institutions in pursuance of orders under the Act, and for their maintenance in and their conveyance to and from such institutions; (d) To make provision for the guardianship of persons placed under guardianship by orders under the Act; (e) If they think fit, to maintain or contribute towards the maintenance of a defective placed in an institution or "approved home," or to contribute towards the expenses of guardianship of any defectives placed under guardianship at the instance of parent or guardian.

There is no obligation upon the Committee to deal with mentally-defective children between the ages of 7 and 16 years who are attending a Special School, and under the care of the Education Committee, nor mentally-defective persons in charge of the Guardians.

CRIMINAL DEFECTIVES.

Persons brought before the Court for petty offences and suspected of being mentally defective are usually remanded for medical examination. On being satisfied that a person comes within the meaning of the Mental Deficiency Acts, the Court directs the officers of the Local Authority to present a petition to a Judicial Authority for the defective to be sent to an institution or placed under guardianship.*

Birmingham with a population of nearly a million has a large number of mental defectives, and as at the present time only the most urgent cases can be dealt with, there is always a long waiting list by reason of the difficulty in finding institutional accommodation.

At present Birmingham places its defectives under contract in certified institutions and in Poor Law institutions, and, in order to provide local accommodation, Birmingham acquired in 1925 Coleshill Hall, together with 180 acres of land, which is now being prepared as a modern institution for the treatment of mental defectives. The adaptation of the Hall and the erection of small homes as supplementary accommodation and quarters for the staff has been proceeding, and it is hoped that shortly this Home, which is situated amongst charming surroundings, will be available for the treatment of mental defectives.

Chapter XXVI.

SEWAGE DISPOSAL.

THE story of the disposal of nightsoil when Birmingham was practically a "midden" town and slowly passing to a water-carriage system is briefly told in the chapter on salvage.

Early in the 70's of last century the question of the treatment of the town's sewage had become a pressing problem. Neglect to make proper provision for a growing population and constant pollution of the River Tame and its tributaries were causing complaints and threats of legal actions and claims for damages, injunctions restraining the Town Council from causing a nuisance on land and water having already been granted.

The Great Public Health Act of 1875.

Up to this time the sedimentation tank and an irrigation area at Saltley were the only means of dealing with the sewage of a population of over 300,000. The gradual supersession of the middens and cesspools of the town by a water-carriage system of sewage disposal, and the development of Birmingham and surrounding districts, tended to aggravate further the difficulties, and in 1876 the Town Council, during the mayoralty of Mr. Joseph Chamberlain, took steps for the formation of an united district drainage board, a course made possible by the provisions of the great Public Health Act of the previous year.

A conference of neighbouring local authorities was convened by the Sewage Committee of the Council, at which resolutions were carried recommending the authorities concerned to form an united district drainage board for the purpose of carrying into effect a system of intercepting and outfall sewage and of disposal of sewage for all such districts or contributory places; and that a joint committee be formed for promoting the object desired.

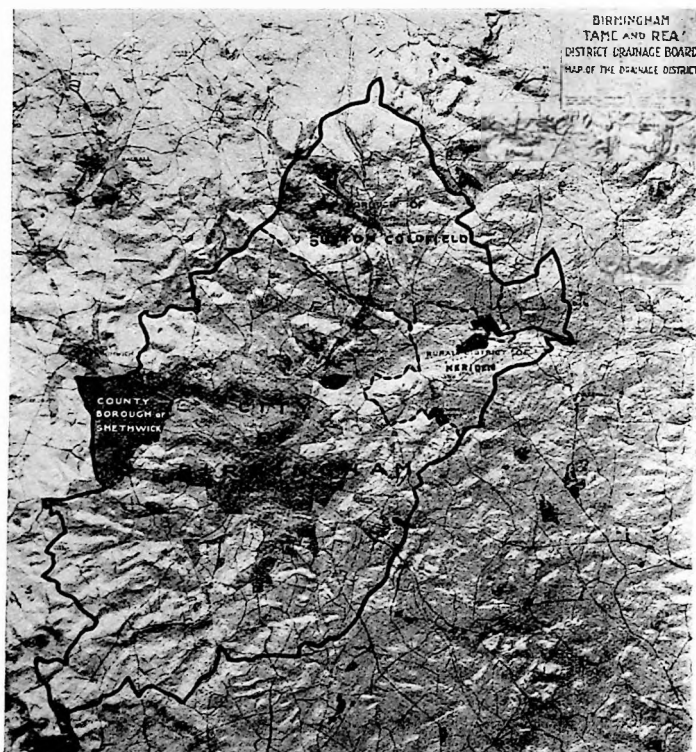
* NOTE.—Although the Court itself can make an Order for a defective to be sent to an institution, or placed under guardianship, the Birmingham Justices, almost in every instance, have directed the local authority to present the petition.—W.S.B.

The joint committee prepared a scheme, which was submitted to the Local Government Board, who, after an inquiry held in Birmingham in 1877 lasting seven days, issued a Provisional Order constituting the Birmingham Tame and Rea Main Sewerage District.

The Drainage Board Appears on the Scene.

The Bill confirming the Provisional Order received the Royal Assent in August, 1877, and the governing body of the newly-formed sewerage area was called The Birmingham Tame and Rea District Drainage Board. The districts at that time included were Birmingham, Aston Manor, Smethwick, Balsall Heath, Handsworth, Harborne, and Saltley; also parts of King's Norton and Northfield, the rural parish of Aston (comprising Erdington, Witton, Castle Bromwich, Water Orton, and Little Bromwich), and the parish of Perry Barr. There was an estimated population of 475,944 and an area of 34,343 acres.

The Board then consisted of two *ex officio* and twenty elective members, but various enlargements of the districts served have taken place from time to time involving changes in its constitution. At times proposals



MAP OF DRAINAGE DISTRICT.

have been made in the City Council that the Corporation should take steps to merge the work of the Board in that of the Corporation with a view to the Board being dissolved, but no developments have occurred in this direction, and the relations of the Council and Board have always been and continue to be of a cordial character.

The Board Set to Work.

The new Drainage Board set to work, taking over the sewage plants and lands of the constituent authorities, connecting the various districts with the works at Saltley and constructing a new primary subsiding tank there. They received sanction from the Local Government Board to borrow £164,000 to pay for the works and land taken over and new constructions, and proceeded to consider the best methods of treatment and the disposal of the sewage of the combined districts. Having decided in favour of a process of precipitation, irrigation, and farming, a large area of land was acquired between Saltley and Plants' Brook and works arranged for distributing the sewage over the land.

The Board had knotty problems to settle in connection with the conveyance of the sewage of the constituent districts to the outfall works, and one that was settled in 1881 involved the construction of a sewer about six and a quarter miles in length between Sparkbrook and Ashfold (near Tyburn), partly in tunnel near Hodge Hill Common and in syphon under the River Tame. Up to 1886 nearly a thousand acres of additional land were acquired for the purposes of irrigation, farm buildings were erected, and farms stocked.

With increasing population still further extension became necessary, and in 1897 a £400,000 scheme was sanctioned by the Local Government Board to extend the farm at Saltley by another 1,000 acres down the Tame Valley, and additional works with a main outfall channel into the Tame near Sweetmore Bridge, Minworth. This extension scheme needed three crossings under the Fazeley canal by main conduits, the lowering of the bed of the river, and abolition of the weir at Forge Mills.

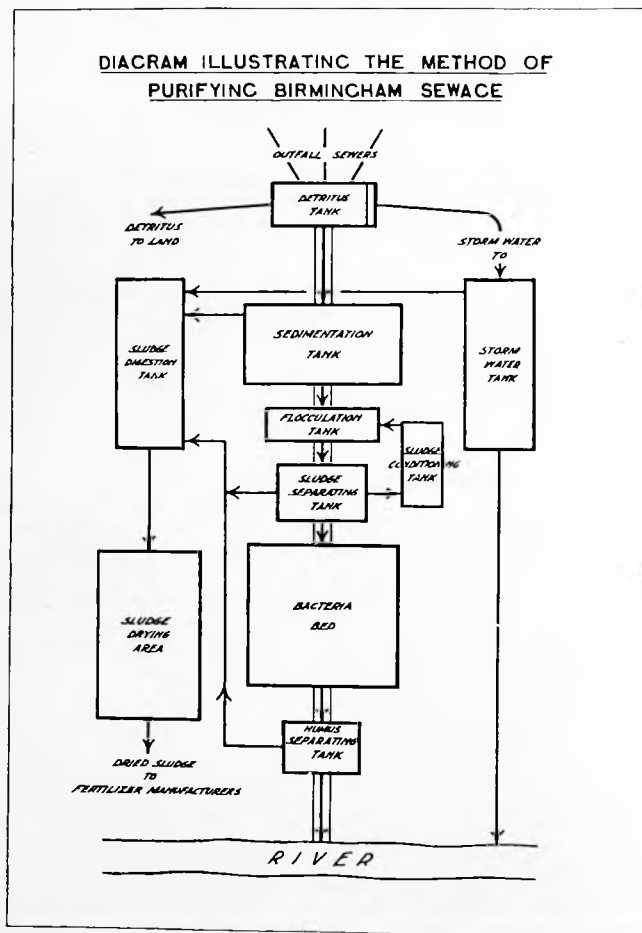
Trouble with Tamworth.

Even while these improvements were in progress the Tamworth authorities commenced legal proceedings in respect of the alleged pollution of the river, and the Drainage Board at once carried out further improvements at Saltley at a cost of over £117,000. After eleven years of litigation, during which the changes outlined in the two succeeding paragraphs took place, judgment was given in favour of the Board, largely due to the establishment of the theory which had been continuously urged by the engineer to the Board, that the effluent from the works, owing to its chemical composition, improved the river rather than deteriorated it.

Death Knell of the Sewage Farm.

A significant change of methods in the treatment of sewage was heralded in 1898 in a joint report by Professor James Dewar, the scientist, and the late Mr. Hawksley, consulting engineer to the Board. They suggested that it was desirable that simple experimental filters should be constructed to test the expediency of adopting artificial filtration as an aid to land treatment. The death knell of the "sewage farm" had been rung, and soon after the system of treatment of sewage in bacterial filters instead of by irrigation was adopted. In subsequent years Mr. Watson, then Engineer to the Board, designed and carried out a complete scheme of treatment by bacteriological processes.

The gradual discontinuance of land irrigation as a means of purifying sewage, owing to the new methods introduced, enabled the Board to sell and lease large parcels of land for industrial purposes and farm holdings. The farming operations of the Board disappeared; bacteria filter beds took their place. By arrangements with the Corporation the ashes and debris from the Gas, Electric Supply, Public Works, and Salvage Departments were removed by the Board and used for filtration and other purposes, necessitating an outlay of £70,000 for transport, equipment and constructional work at Minworth.



Story of Sewage Purification like a Romance.

The story of sewage purification by bacterial methods—the harnessing of bacterial life to perform work for the good and comfort of mankind—is like a romance. How anerobic organisms help by fermentation and digestion in the conversion of 400,000 tons of crude sludge to a form that can be dried in the open air without offence, and how aerobic organisms assist in purifying the sewage liquor almost to drinking quality, are questions that may be studied by citizens in scientific treatises on the subject.

Such strides have, indeed, been made that at Saltley a 150 horse-power internal combustion engine generating electricity is worked by sludge gas collected in concrete containers which float on the surface of the sludge digestion tanks.

The Drainage Board works now purify the sewage of a population of 1,077,163. A dry weather flow of 29,000,000 gallons a day is dealt with at the Tame Valley works at Saltley, Ashfold, Tyburn, and Minworth, and 3,000,000 gallons at the Cole Valley installations at Cole Hall and Acock's Green; and the storm water tanks at Saltley have been extended to cope with the speedy discharge from Birmingham owing to the increasing area of unpermeable surfaces of streets, roofs, and yards.

Workshops Capable of Dealing with all Breakdowns.

The electrical and mechanical equipment of these places are in constant use, and the workshops at Minworth and Saltley are capable of dealing with all breakdowns and maintenance repairs. The total cost of the works during the year 1926-27, including interest and repayment of loans, was £175,353, a charge of about 3s. 3d. per annum on each person within the drainage district. Birmingham's City Treasurer is Treasurer of the Drainage Board.

That sewage purification need not be carried out in an inartistic environment is proved by the general layout of the various works of the Board, where pleasant surroundings are afforded by the presence of plantations, flower-borders, and shrubberies.

"Fifty Years of Harmonious Co-operation."

Fifty years have passed since the formation of the Drainage Board. In the words of Mr. Neville Chamberlain, in his foreword to the "History of the Birmingham Tame and Rea District Drainage Board," it has been "fifty years of harmonious and successful co-operation between adjacent local authorities, widely dissimilar in size, wealth, and population, but working together for common interests and with common benefits to all concerned. Together they have, with the assistance and advice of their highly gifted staff, gradually worked out a method of treatment capable of dealing with an average daily dry weather flow of over thirty million gallons of sewage in a comparatively limited area of ground, and at what must be termed a trifling cost per head of population. By the marvellous adaptation of natural forces to the service of man, the crude and offensive materials discharged from a great industrial area are quickly transformed into innocuous solids and an effluent the purity of which leaves nothing to be desired, while even the gas given off by the fermentation serves to drive the engine which provides the works with light and power."

Citizens of Birmingham can congratulate themselves on the wisdom of their councillors of 1876, and have no reason to regret that a proposal of that period to take Birmingham sewage to the sea on the East Coast was not adopted.

Chapter XXVII.

CITY OF BIRMINGHAM ORCHESTRA.

THE City of Birmingham Orchestra was first instituted in 1919, when, at a meeting of the City Council, it was reported that a number of prominent citizens were desirous of establishing a City orchestra, to consist of a body of instrumentalists recruited as far as possible from local sources. It was proposed that the annual season should last for thirty weeks, from October to May, that popular Sunday and Saturday evening concerts, together with twelve Wednesday symphony concerts, should be given, and a series of evenings devoted to light music. Free concerts were to be given a prominent place in the season's activities.

Guarantees by Private Subscribers and Corporation.

It was estimated that the total annual cost of the scheme would be about £8,500, while the revenue derived from the engagements and concerts was expected to reach £6,000. Half of the deficiency was guaranteed by private subscribers for a period of five years and the remaining £1,250 similarly guaranteed by the Corporation. So high was the Council's estimation of the work of the orchestra during the first five years of its existence that in 1925 the grant was extended to £2,500.

Since its inception the orchestra has well justified its existence, and has already earned an envied reputation in London, not less than in the Midlands and provinces. The orchestra has, moreover, done a vast amount of valuable work of an educational character among the school children of the City. Concerts for pupils, at which their teachers were invited to be present, have proved very successful. Programmes of music, particularly suitable for juvenile audiences, have done much to cultivate a taste for good music in these future citizens.

Out-of-Town Engagements.

The orchestra fulfils many out-of-town engagements, and in recent days has visited the schools and colleges of Rugby, Cheltenham, Malvern, Wellington, Shrewsbury, and Oundle, and in addition sent orchestras to Leamington, Burton, Hanley, Shrewsbury, Kidderminster, West Bromwich, Oxford, and Malvern. An orchestra of seventy-five was provided for the Gustav Holst Festival at Cheltenham and for a concert by the City of Birmingham Choir, and, for the first time in their history, the orchestra was away from the City for a period of three weeks for a season of grand opera at Bristol. Eight symphony concerts were given in Birmingham during the last season and four concerts for children.

The Sunday evening concerts showed a marked increase in attendance during the last season, and, though still resulting in slight financial loss, the result is extremely encouraging. Much is done in this and other ways to popularize music in the City, and there is a marked growing appreciation of the efforts of the orchestra.

The orchestra is the first of its kind to be established in the country. Other towns have followed Birmingham's lead, but none yet instituted has such a reputation as that enjoyed by the Birmingham venture. It has still a long way to go before it will be self-supporting, but the results achieved have more than justified the City's faith in the Orchestra, and have proved that it is worthy of civic support and admiration.

LIST OF BYE-LAWS

in operation in the City of Birmingham, arranged in order of introduction. Dates in brackets indicate part repeal, amendment, or addition.

Title.	Date.	Title.	Date.
Lime Kilns, Nuisances from	1864	Lights on Vehicles ...	1914
New Streets and Buildings		Good Rule and Government	1914
(1887) (1910) (1914) ...	1876	Cemeteries and Burial	
Signboards, Emblems, and		Grounds (1919) (1927) ...	1915
Projections ...	1886	Underground Rooms ...	1915
Water, Waste, etc. ...	1887	Advertisements in Streets ...	1915
Whirligigs, Swings, etc. ...	1893	Street Collections ...	1917
Porters, Drivers, and Carriers	1895	Searchlights in Streets ...	1920
Locomotives on Highways		Employment of Children and	
(1902) (1905) ...	1896	Young Persons ...	1920
Dairies, Cowsheds, and Milk-		House Refuse (collection) ...	1921
shops ...	1901	Houses Let in Lodgings ...	1922
Education, Attendance at		Disorderly Behaviour on	
School ...	1901	School Premises ...	1922
Public Libraries (1922) ...	1902	Writing on Roadways—	
Cabmen's Shelters ...	1904	Deposit of Waste Paper in	
Offensive Trades ...	1905	Streets ...	1923
Stage Carriages (Omnibuses,		Covering Meat in Transit	
etc.) ...	1907	through Streets ...	1923
Common Lodging Houses ...	1909	Tramways ...	1923
Nuisances (Snow, Filth, etc.)	1909	Omnibuses (One-man 'Bus)	1923
Tents, Vans, etc. (used for		Hackney Carriages (1924)	
human habitation) ...	1909	(1925) (1927) ...	1907
Rag, Bone, and Skin Mer-		Public Baths...	1925
chants ...	1909	Luggage Porters or Light	
Sale of Coal and Tare Weight		Porters ...	1925
Regulations (1896) ...	1909	Parks, Public Walks, and	
Markets and Fairs and Market		Places of Public Resort or	
Tolls ...	1909	Recreation (1927) ...	1925
Public Slaughter Houses ...	1909	Allotment Rules ...	1926
Private Slaughter Houses		Regulations under Warwick-	
(1910) ...	1909	shire (Control of Dogs)	
Knackers' Yards ...	1909	Order ...	1907
Fire Escape in Factories ...	1911	Maternity Homes ...	1927
Registries for Female Servants	1912	Overhead Wires and Appara-	
Regulating Traffic, etc. (1922)		tus ...	1927
(1927) ...	1914		

City of



Birmingham

Keep Birmingham in mind—

for the establishment of manufactories and industrial development. Birmingham is the home of the skilled artisan, the birthplace of the industrial revolution; it has a good and abundant water supply, excellent transport facilities, and efficient gas and electricity services for power, heating, and lighting purposes.

For information as to sites and all other particulars, apply to the Town Clerk, Council House, Birmingham.

A definite aim!



For over 50 years the aim of the
CITY OF BIRMINGHAM GAS DEPARTMENT has
been to render

Good Service to the Public!

The success of this policy is shown in the remarkable growth of the Department during this period. During 1927 nearly fourteen thousand million cubic feet of gas were sold—six times the quantity sold in 1876. In the last fifty years the mileage of mains has nearly trebled, and the number of consumers has increased from 46,000 to over 200,000.

By means of the slot meter the benefits of gas lighting and cooking have been brought within the reach of thousands of the poorest citizens, and every week their number is increased.

The Birmingham Gas Department has done pioneer work in the development of gas for industrial heating processes. Its Industrial Research Laboratories and Heat Treatment shops are always at the service of the manufacturers of the city.

CITY OF BIRMINGHAM GAS DEPARTMENT.

HEAD OFFICE: The Council House, Birmingham.

BRANCHES: King's Norton, Sutton Coldfield,
Acock's Green, Erdington,
Harborne, and Wednesbury.

BIRMINGHAM CORPORATION SALVAGE DEPARTMENT

Enquiries are invited in connection with the following
by-products :

1. CONCENTRATED MANURES.

	Nitrogen.	Soluble Phosphate.	Insoluble Phosphate.
(a) Fish Manure	9.0%	1.5%	15.5%
(b) Meat Manure	8.7%	1.5%	15.5%
(c) Bone Manure	0.8%	1.0%	59.0%
(d) Slaughterhouse Manure	5.0%	1.0%	5.0%

2. FINE DUST. Suitable for use upon heavy land and reclaiming of waste land; contains 1% Ammonia and 1% Phosphate. 3/- per ton F.O.R. Birmingham.

3. MEALS FOR PIG OR POULTRY FOOD.

	Albuminoids.	Oil.	Phosphoric Anhydride.
(a) Fish Meal	53.0%	11.0%	8.0%
(b) Meat Meal	53.0%	12.0%	8.0%

4. FATS. For Soap and Candle-making.
5. HYDRAULICALLY COMPRESSED SCRAP METALS.
- (a) De-tinned Scrap ;
 - (b) Galvanized Scrap ;
 - (c) Enamelled Scrap.
6. CRUSHED, SCREENED, AND GRADED CLINKERS. For Concrete and Media for Bacteria Beds.
7. MILL MADE MORTAR.
8. BUNDLED WASTE PAPER.

Particulars of prices and any required information can be obtained upon application.

JAS. JACKSON, O.B.E.,

Salvage Department,
161, Corporation Street,
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Superintendent.

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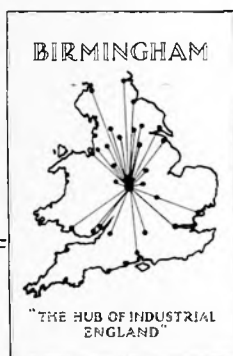
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